DOCUMENT RESUME

ED 097 443 CE 002 205

AUTHOR	Gillie, Angelo C., Ed.
TITLE	The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education.
INSTITUTION	Pennsylvania State Univ., University Park. Center for the Study of Higher Education.
PUB DATE	Jun 74
NOTE	246p.
EDRS PRICE	MF-$0.75 HC-$11.40 PLUS POSTAGE
DESCRIPTORS	Administrator Role; Adult Education; *Articulation (Program); *Career Education; College Administration; Colleges; Conference Reports; Correctional Education; *Educational Coordination; High Schools; Junior Colleges; *Post Secondary Education; Rehabilitation; Secondary Education; Technical Institutes; Transfer Students; *Vocational Education; Vocational Education Teachers; Vocational Schools
IDENTIFIERS	Massachusetts; Oklahoma; Pennsylvania

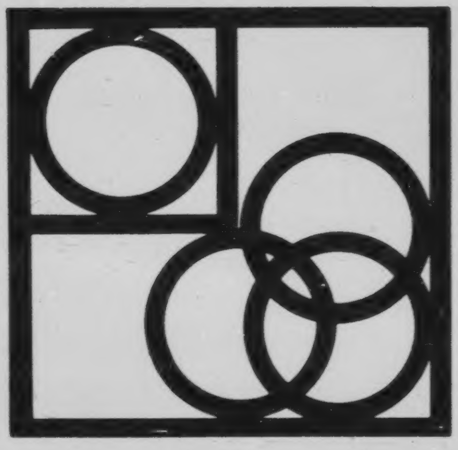
ABSTRACT

The document contains the full text of the following conference papers: Introduction: Cooperative Ventures in Vocational Education: Pennsylvania Style, by Angelo C. Gillie, Sr.; Cooperation and Coordination Among Secondary and Postsecondary Vocational Education: The Massachusetts Story, Charles H. Buzzell and Vincent P. Lamo; Cooperation and Coordination between Secondary and Postsecondary Vocational-Technical and Adult Education: The Oklahoma Story, Francis Tuttle and Arch Alexander; Coordination of Secondary and Postsecondary Vocational Programs, Lowell A. Burkett; Organizational Ambivalence: Problems in the Coordination of Occupational Education in Multi-Unit Urban Community College Districts, Arthur R. Oswald; The Role of the Community College President in Keeping Vocational Programs Viable, Ernest Notar; Vocational Education for Offenders, Charles D. Whitehead; The New Technical Institute Movement in Pennsylvania, Donald Thomas; The Feasibility of Credit Exchange between AVTS and the Community College, John G. Berrier; Project VAULT: What It Is and What It Does, David G. Minnis; Career Education: Cooperative Efforts in Northampton County, Frank E. Ensminger; Articulation in the Back Seat: The Neglect of the Vocational Student Transfer, William K. Applegate and Arden L. Pratt; and Evaluation of the Conference, Eugenio A. Basualdo. (NH)

ED 097443

The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education

Angelo C. Gillie
Editor



U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION
THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY

CE 002305

Center for the Study of
Higher Education

The Pennsylvania State University

The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education

Angelo C. Gillie
Editor

Center for the Study of
Higher Education

The Pennsylvania State University
University Park, Pennsylvania

June 1974

CONTENTS

List of Figures vii

List of Tables ix

Foreword xi

Preface xiii

Introduction: Cooperative Ventures in Vocational Education: Pennsylvania Style
Angelo C. Gillie, Sr. 1

Cooperation and Coordination Among Secondary and Postsecondary Vocational Education: The Massachusetts Story
Charles H. Buzzell and Vincent P. Lamo 30

Cooperation and Coordination Between Secondary and Postsecondary Vocational-Technical and Adult Education: The Oklahoma Story
Francis Tuttle and Arch Alexander 48

Coordination of Secondary and Postsecondary Vocational Programs *Lowell A. Burkett* 55

Organizational Ambivalence: Problems in the Coordination of Occupational Education in Multi-Unit Urban Community College Districts
Arthur R. Oswald 70

The Role of the Community College President in Keeping Vocational Programs Viable
Ernest Notar 101

CONTENTS (cont.)

Vocational Education for Offenders
Charles O. Whitehead 116

The New Technical Institute Movement in Pennsylvania *Donald Thomas* 124

The Feasibility of Credit Exchange Between AVTS and the Community College
John G. Berrier 130

Project VAULT: What It Is and What It Does
David G. Minnis 136

Career Education: Cooperative Efforts in Northampton County *Frank E. Ensminger* 173

Articulation in the Back Seat: The Neglect of the Vocational Student Transfer
William K. Applegate and
Arden L. Pratt 179

Evaluation of the Conference
Eugenio A. Basualdo 197

Appendix A: Letter and Questionnaire (Cooperative Efforts in Commonwealth Vocational Programs) 209

Appendix B: Letters of Invitation to Conference 215

Appendix C: Conference Evaluation Questionnaire 219

Appendix D: Conference Format and Speakers 225

CONTENTS (cont.)

Appendix E: Advisory Committee: Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education 233

Appendix F: Registered Participants 237

Appendix G: Public Law 346 243

LIST OF FIGURES

Figure 1. Cooperating Schools: Composite Map 23

Figure 2. Cooperating Community Colleges 24

Figure 3. Cooperating Area Vocational-Technical Schools (AVTS) 25

Figure 4. Cooperating Associate Degree-Granting Proprietary Schools 26

Figure 5. Cooperating Nondegree-Granting Proprietary Schools 27

Figure 6. Cooperating Private Junior Colleges 28

Figure 7. Cooperating Comprehensive High Schools 29

LIST OF TABLES

Table 1 Community College Course Offerings in Cooperation with Other Educational Institutions 12
Table 1.1 Health 13
Table 1.2 Trade and Technologies 14
Table 1.3 Other Instructional Programs 15
Table 2 Area Vocational-Technical Schools (AVTS) 16
Table 3 Proprietary Schools Offering the Associate Degree 17
Table 4 Private (Nondegree) Trade and Business Schools 18
Table 5 Private Junior Colleges 19
Table 6 Comprehensive High Schools 20
Table 7 Grade in School in which Present Occupational Plans Decided as Indicated by a National Sample of Junior College Students Enrolled in Occupational Programs 46
Table 8 Attendance at Talks and Workshops 199
Table 9 Rating of Events by Exchange of Ideas 200
Table 10 Degree to Which Presentations Followed the Theme of the Conference 201

LIST OF TABLES (cont'd)

Table 11 Amount of Information Provided by Presentations 202

Table 12 Overall Rating of Presentations 203

Table 13 Rating of Possible Topics for 1974 Conference 205

Table 14 Attendance at Talks and Workshops by Head Count 206

FOREWORD

Ever since the passage of the Smith-Hughes Act of 1917, which was intended to promote vocational education at the secondary level and to provide for part-time vocational education for out-of-school youth and adults, vocational education has been growing steadily in the United States. Initially it grew in the secondary schools and was not widely available to other than secondary students. The NDEA Act of 1958 and the Vocational Education Act of 1963 provided monies and mandates to remedy this deficiency. A chief mandate urged the various components of American education to cooperate in forming programs which would be available to all Americans as they needed them for pre-entry skills, job upgrading, and job mobility, to mention some of the salient needs.

These mandates and the growth in enrollments, institutions, and programs in the sixties have led those who administer the programs to active concern for providing articulation, cooperation, and coordination necessary for a successful occupational educational system.

Last year this conference dealt with articulation between secondary and postsecondary education. This year the conference deals with cooperation and coordination between those elements.

We believe the papers generated for and by this conference and contained in this volume of the proceedings are most useful to those who are concerned with the many facets of the cooperation and coordination of secondary and postsecondary occupational education.

G. Lester Anderson
Director, Center for the
Study of Higher Education

PREFACE

The papers presented in this monograph have evolved from the Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education. Each year participants from the previous conference select the annual theme. During the selection process following the Fourth Annual Conference, the problem mentioned most often was enlisting cooperation and coordination between secondary and postsecondary schools in order to maximize the delivery of vocational education to citizens of Pennsylvania.

In conjunction with the conference, a statewide survey of the "state of the art" relative to cooperation and sharing of faculty and facilities for vocational students was conducted. The general results of the survey are presented in this monograph by this author. A complete report of the study has been published by the department of vocational education at Penn State.

The papers presented herein, for the most part, are concerned with the major theme. In addition to the presentations at the conference itself, several papers from recognized educators in specific fields were solicited. Dr. Buzzell and Dr. Lamo presented the "state of the art" in Massachusetts with regard to cooperative vocational efforts between secondary and postsecondary schools. Oklahoma's situation is described by Dr. Tuttle and Mr. Alexander. These papers present evidence that active efforts to promote cooperation among educational institutions at secondary and postsecondary levels are ongoing in various parts of the nation. One suspects that the move toward cooperative efforts is widespread and will soon become expected of all schools.

Cooperative efforts, as they relate to large urban centers, are of special concern. For this reason, Dr. Arthur Oswald was invited to prepare a paper on the coordination of vocational programs in multi-unit urban community college districts. Dr. Oswald has served as Provost of Honolulu Community College and is co-author of a recently published study on the problems of urban community colleges. Drs. Tuttle and Buzzell are directors of vocational education in their respective states, which provides them with insight into the trends toward vocational education cooperation and coordination.

Mr. Burkett, Executive Secretary of the American Vocational Association, provides an overview of coordination between secondary and post-secondary vocational education from a national perspective. His presentation provided valuable insight into the national scene.

Mr. Whitehead was invited to prepare a paper about vocational education for offenders, a presentation indicative of the modern, more humane approach to rehabilitation.

Much has been heard over the years about the difficulty of maintaining viable vocational programs in a comprehensive educational institution such as the community college. Dr. Ernest Notar, a community college president for eleven years and a dean for more than a decade, was invited to prepare a paper on this topic. In his straightforward presentation, he maintains that to have a viable vocational program in a community college requires a continuous effort and commitment to vocational education by the president himself. Dr. Notar is an example of such a president as evidenced by the successful vocational programs in the institution he leads.

Another community college president, Dr. John Berrier, was invited to present a paper on the feasibility of credit exchange between area vocational schools and community colleges because of his long and successful experience in this area.

Dr. Pratt and Mr. Applegate were asked to co-author a paper on the problems encountered during the transfer of vocational students from one school level to another.

Messrs. Thomas, Minnis, and Ensminger prepared papers on several issues related to cooperative efforts. In each case, a specific effort is described, which again supports the belief that cooperation is already taking place in vocational education within the Commonwealth.

Added incentive to cooperation comes from the passage of the General Assembly Act Number 346 (see Appendix G), which permits, among other things, area vocational school districts to offer post-secondary vocational programs and/or to establish technical institutes. This author will not attempt to interpret all the possible ramifications of this important legislation. One positive outcome is that area vocational schools and community colleges could be motivated to enter into more cooperative arrangements, such as consortiums.

In conclusion, the nearly 100 conference participants, based on the evaluation described in Mr. Basualdo's paper, felt the conference benefited them and enabled them to better understand certain aspects of institutional cooperation in vocational education.

Thanks is offered by this writer to the Advisory Committee (see Appendix E), especially Dr. Dean Witmer and Mr. Robert Sheppard. Special

thanks goes to several graduate assistants who helped to keep the conference flowing smoothly, particularly Eugenio Basualdo, Elizabeth King, Nye Scofield, Joseph Chevalier, and Clinton Amos. A note of thanks is accorded to Miss Anna DeSantis, who assisted throughout the planning of the conference and in the preparation of the monograph. Lastly, acknowledgment and appreciation for financial support of the annual event is given to Penn State's Center for the Study of Higher Education and the department of vocational education, which received funding from the Pennsylvania Bureau of Vocational, Technical, and Continuing Education.

INTRODUCTION: COOPERATIVE VENTURES IN VOCATIONAL EDUCATION: PENNSYLVANIA STYLE

Angelo C. Gillie, Sr.
Professor, Department of Vocational Education
and Associate, The Center for the Study
of Higher Education,
The Pennsylvania State University

Pennsylvania has a wide range of vocational education delivery systems. The most significant components in these systems, in terms of people served, include several types of public educational institutions (October, 1973): comprehensive high schools--609; area vocational-technical schools--72; community colleges--17 campuses; state colleges--13; and state-supported universities--4. In addition, there is a private sector of education which includes independent nonprofit and profit-making institutions. The independent nonprofit group (which includes sectarian and nonsectarian schools) consists of junior colleges--13; senior colleges and universities--107; and the profit-making institutions which are the nondegree-granting proprietary schools--193, of which 103 are trade and 90 are business-related types; and those authorized to grant the associate degree--37. Therefore, it can be seen that the Commonwealth has a diversity of public and nonpublic institutions at both the high school and college level that have the capability of providing a rich array of vocational education offerings to state residents. Figures 1 through 7 display the geographic distribution of the institutions included in this survey.

Equally diverse are people who need some form of vocational education at one or more times during their lives. Perhaps as many as 80 percent of the state's residents will need this kind of educational assistance at least once, and more likely several times, during their lifetimes. Some of the more identifiable groups are:

1. Secondary school-age youngsters (at least 70 percent of the 14 to 18 year olds);
2. High school graduates (25 percent or more of recent graduates);
3. Persons preparing for a mid-career change in occupations (a sizeable fraction of the total work force);
4. In-and-out vocational education for persons needing updating and upgrading of skills (a perennial need for many individuals); and
5. Persons entering or actually in retirement.

This list is not inclusive but is representative of the classifications of people who are in need of some kind of vocational education from time to time.

In the past, vocational education centered on the business-industrial community and its occupational needs. As American society in general became more concerned about people and their multi-faceted needs, vocational education began to alter its primary concern of filling jobs to satisfying people-centered needs. This viewpoint was expressed in the federal legislation supporting vocational education, particularly the Vocational Education Act of 1963[1] and the Vocational Education Amendments of 1968.[2] In attempts to facilitate people's vocational education needs, these federal acts provided substantial financial subvention for vocational education. In order to minimize direct federal influence on vocational education matters, the funds were allocated to individual states in accordance with a formula which reflected the categories of people deemed most in need of vocational education. Each state then entered into a contractual arrangement (in the form of a state plan for vocational education) with the federal government for disbursement of funds. Some vocational educators believe this mode of federal subvention, which required at least a matching allocation from the states, has served as an effective impetus for state and local governments to expand their vocational programs.

These two acts have served as major catalysts in the establishment of more than 2,150 area vocational schools nationwide.[3] Also, a considerable portion of these funds have been funneled into vocational programs offered at other institutions, particularly comprehensive high schools (17,660 out of 29,122 in 1970)[4] and community colleges (most of the 1,150 in 1973).[5]

---

[1] Public Law 88-210, 88th Congress (Vocational Education Act of 1963).

[2] Public Law 90-576, 90th Congress (Vocational Education Amendments of 1968).

[3] *Directory: Area Vocational Education Schools: Fiscal Year 1972* (Washington, D.C.: U. S. Office of Education, Bureau of Adult and Vocational-Technical Education, 1973).

In Pennsylvania, as indicated in the description of the several vocational education delivery systems presently found in the Commonwealth, the existence of a diversity of institutional types offering vocational education, while troublesome in some respects, has several advantages. Its major strength is the enhanced possibility of serving a greater range of people--from adolescents to career changers to retirees, from the barely literate to the more intellectual, from persons who prefer working with things and data to those who are most content working with other people. Serving this range of people and interests mandates a vocational education delivery system that includes all of the kinds of vocational institutions presently found in the Commonwealth. One way in which this diversity can be maximized is by establishment of a network of cooperating institutions throughout the state. Each school could be encouraged to accentuate those vocational programs in which it is best able to serve by virtue of its location, faculty, facilities, and expertise. It is apparent that there is considerable agreement among vocational educators, legislators, and the public that cooperation is both desirable and necessary. In response to this concern, several actions have recently taken place. The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education selected the theme "Secondary and Postsecondary Occupation: Coordination and Cooperation," for its meeting in October 1973 at The Pennsylvania State University. Second, a statewide study was conducted on the "state of the art," or the institutional cooperation in vocational education, by Penn State's department of vocational education. The initial results of this survey are presented in capsule form.

---

[4] N. A. Osso, *Directory of Secondary Schools with Occupational Curriculums: Public and Nonpublic* (Washington, D.C.: U. S. Office of Education, AVES, 1973).

[5] *AACJC Directory: 1973* (Washington, D.C.: The American Association of Community and Junior Colleges, 1973).

The Study and a Brief Review of the Findings

Six vocational institutional types in Pennsylvania were surveyed: area vocational-technical schools; comprehensive high schools; public community colleges; private junior colleges; nondegree-granting proprietary schools; and associate degree-granting proprietary schools. A portion of the survey was conducted via telephone interviews and the remainder by mail questionnaires. The telephone inquiry incorporated the identical questions found in the written questionnaire (see Appendix A). The data-gathering effort began in mid-October, shortly after the completion of the Fifth Annual Conference (a brief pretest of the survey was conducted the preceding summer) and was completed in January 1974. Although there was some reluctance on the part of a few respondents to provide the information requested, most viewed the study positively and asked to have a copy of the results.

1. The Community College

The geographic location of Pennsylvania's community colleges is displayed in Figure 2. Seventeen community college campuses were surveyed. All responded.

The data showed that 42 different vocational programs included cooperation with other institutions. Four other kinds of vocational programs were in the proposal stage and the colleges were prepared to enter into cooperative arrangements with other schools or institutions. The totals revealed 60 cooperative programs in actual operation (an average of 3.5 per campus), and 18 cooperative programs in the planning stage (an average of one per campus) (see Table 1). A more refined breakdown by program, community college, and the kind of institution with which they were cooperating, is displayed in Table 1.1 for health-related curricula, Table 1.2 for trade and technology programs and Table 1.3 for other curricula.

Twenty-four cooperative programs with hospitals, and 23 with area vocational schools, made up 47 of the 60 cooperative programs presently in operation. The remaining 13 ongoing cooperative programs involved universities or senior colleges, airports, prisons, a county police and fire academy, and other outside sources.

2. The Area Vocational-Technical School

The geographic distribution of Pennsylvania's area vocational-technical schools is displayed in Figure 3. There were 72 area vocational-technical schools in the Commonwealth in October 1973, with 54 responding to the questionnaire. Seventeen of these institutions were already involved with cooperative programs or had programs in the planning stages; 29 programs were offered in cooperation with other institutions (for an average of 1.7 per participating school); and 14 other cooperative programs were in the proposed stage (an average of about one per participating school). The distribution of these programs by institution and curriculum type is displayed in Table 2.0.

The area vocational-technical schools in the Commonwealth are already closely cooperating with one or more comprehensive school districts in the offering of vocational programs. The four most important modes of AVTS operation are: full-time--10; half-day turn-around--53; two-week turn-around--6; and three-week turn-around--4. It is obvious that such arrangements require close cooperation between AVTSs and participating school districts. The area vocational-technical schools have been cooperating institutions from the onset of their operations and such endeavors are not considered unusual. Considering their previous experiences in the area of cooperation with one or more "sending" schools, the area vocational-technical schools, along with community colleges (with their well-known objective of serving needs of people in the community), can easily become the major focal point of the cooperative offering of vocational programs.

3. Associate Degree-Granting Proprietary Schools

There were 37 proprietary schools in Pennsylvania authorized to award the associate degree in October 1973. The geographic distribution of those who share facilities and faculty are displayed in Figure 4. Only one of these schools had an ongoing program which required cooperation with another institution. That same school, plus two others, indicated they had cooperative programs under consideration. In total, three associate degree-awarding proprietary schools were preparing to become involved with new proposed cooperative programs. All of the proposed cooperative institutions were area vocational-technical schools, while five of the proposed cooperative arrangements were with a senior college or university (see Table 3).

4. Nondegree-Granting Proprietary Schools

The geographic distribution of these institutions (193) is displayed in Figure 5. A total of 141 were included in the survey, with 77 responding to the questionnaire. Postal authorities returned 14 questionnaires as "nondeliverable."

Six schools had 12 cooperative programs under way and 8 additional cooperative ventures were in the planning stages (see Table 4). The cooperating institution types for all but one of these programs, both in effect and proposed, was the area vocational-technical school. The other program in the proposal stage was an in-prison program.

5. The Private Junior Colleges

The geographic distribution of the 13 private junior colleges in Pennsylvania are displayed in Figure 6. Eight of the junior colleges were involved with cooperative programs, with 13 in operation and six others in the proposal stages. Six of the colleges were sharing facilities as part of the cooperative effort (see Table 5). One of the institutions closed during the past year (Penn Hall).

6. The Comprehensive High Schools

The 609 comprehensive high schools are spread throughout the Commonwealth. Of that total, 235 were selected for the survey and responses were obtained from 173. Sixty-three have cooperative programs in operation or have one or more in the proposed stage. Program areas include health, technical training, building construction, allied art, and other areas such as audio-visual technology, business management, pre-vocational guidance, and urban career education. Seventy-seven cooperative programs were offered by the schools responding to the questionnaire.

Some of the cooperative programs claimed by the comprehensive high schools are with the area vocational-technical schools and do not represent new cooperative efforts sought by the high school. Therefore, the figures for this part of the survey differ from the other five kinds of institutions examined.

Conclusions and Recommendations

Cooperative ventures in vocational education in Pennsylvania are already in progress. The statewide survey points out the extent to which various kinds of vocational institutions are interacting in the interest of providing more and better vocational education for a larger number of the state's residents. Institutions that have sought and established the cooperative ventures described herein should be commended for expending the additional effort required to bring such programs to fruition. Furthermore, success in these efforts is proof that institutions of different types can cooperatively design vocational programs. In addition, an examination of the present "state of the art" proves that such cooperative arrangements can be made for virtually any kind of vocational program at either the high school or postsecondary level.

Since it is believed that such efforts can produce good vocational programs by cooperating institutions, further cooperation of this type must be encouraged. The demand for the various kinds of vocational education is rising while the level of funding for education as a whole has stabilized. The many vocational institutions in Pennsylvania have a potential to serve more people than they serve at this time. Many of the schools in each of the six types surveyed are not operating at maximum enrollment. Therefore, it is important, in the interest of optimum utilization of existing facilities, institutions, and faculty, to consider ways of coupling students with vocational program needs with the school best equipped to serve them.

To attempt such a coordinative effort on a state-wide basis within a short time is feasible only with a regional approach. A practical approach is to earmark the existing community college districts as the initial cooperative regions. This has a number of advantages. The majority of Pennsylvanians are located in the existing community college regions, as are most of the potential co-operating institutions. A cooperative vocational education regional council can be established for each of the community college regions. Because area vocational-technical schools and community colleges have already made considerable progress in establishing cooperative programs, these institutions ought to be the core of the council. Representation on the council would include key administrators from the community college, the area vocational-technical schools located in that region, one person from each of the other institutional types described herein, and a salaried executive secretary. Such a council could quickly establish a "program of work" for itself, planning new co-operative programs as well as improving existing cooperative efforts.

In conclusion, Pennsylvania is fortunate to have an existing multiple vocational education delivery system at a time when it is vital to maximize the utilization of all institutions to provide vocational education for more Pennsylvanians.

BEST COPY AVAILAB

Table 1

COMMUNITY COLLEGE COURSE OFFERINGS IN COOPERATION WITH OTHER EDUCATIONAL INSTITUTIONS

KEY:

X HAVE
O PROPOSED

	SECRETARY TECH.	BUILD. CONST. TECH.	ACCOUNTING	ASSOCIATE DEGREE NURSING	NURSING LPN	NURSING RN	ANESTHESIOLOGY	EMERGENCY MEDICAL TECH.	DIETARY TECHNICIAL	CRIMINOLOGY	PROFESSIONAL PILOT	HOTEL & RESTAURANT	INHALATION THERAPY	NUCLEAR MEDICAL TECHNICIAN	MEDICAL LAB. TECHNICIAN	MACHINE SHOP PRACTICE	OCCUPATIONAL THERAPY	DRAFTING TECHNOLOGY	ELECTRICAL TECHNOLOGY	CIVIL TECHNOLOGY	OPERATING ROOM TECHNICIAN	PLUMBING & HEATING	CONSTRUCT ELECT.	X-RAY	DENTAL ASSISTANT	DATA PROCESSING (COMPTR. SC.)	MACHINE DESIGN	ARCHITECTURAL DESIGN TECH.	GRAPHIC ARTS	WELDING	HEALTH ASSISTANT	RADIOLOGY TECHNOLOGY	IND. CHEMISTRY	CHEM. LAB. TECHNOLOGY	AUTOMOTIVE MOTORCYCLE REPAIR	ENVIRONMENTAL CONTROL	INTERIOR DESIGN	PRISON PROG.	HIGH SCHOOL STUDENTS	AIRCRAFT MAINTENANCE	AIRCRAFT WELDING	COMMON INSTRUMENT GROUND SCHOOL	MENTAL HEALTH TECH.	DIESEL SERVICE TECH.	HEATING & AIR CONDITION	RETAIL MARKETING
ALLEGH. A.						x	ox	ox	x				o	o																																
ALLEGH. B																																														
ALLEGH. N.	x	x	x		x														x							x				x					x									x	x	x
ALLEGH. S.											x																								oo					x	x	x	x			
BUCKS																																	o	o												
BUTLER					o					x																																				
CC OF BEAVER				x	x						x																																			
CC OF DELAWARE				x								x	x																			o														
CC OF PHILA.																																														
HARRISBURG					x									x	x															o					o											
LEHIGH																x	x	x	x	x	x	o													o	o										
LUZERNE																						x	x														o									
MONTGOMERY					x	x																		x	x													x								
NORTHUMBERLAND					x	x													x							x	x	x																		
READING					o													o																												
WESTMORELAND				x	x																								x	x																
WILLIAMSPORT					x																x				x	x					x	x						x								

TOTAL NUMBER IN PENNSYLVANIA: 17
TOTAL NUMBER IN SAMPLE: 17
NUMBER OF RESPONDENTS: 17

NUMBER WITH COOPERATING PROGRAMS: 13
PROGRAMS IN PLANNING STAGE: 13
NUMBER SHARING FACILITIES: 10

Table 1.1

HEALTH

	BUTLER CCC	ALLEGHENY CC		BEAVER CC	DELAWARE	HARRISBURG A.C.C.	MONTGOMERY CCC	NORTHAMPTON CACC	WESTMORELAND ACC	WILLIAMSPORT
		ALLEG	N S							
ASSOC. DEGREE NURSING	0			6	6	6			6	0
NURSING LPN	0			6				6	6	6
NURSING RN	0	6						6		
ANESTHESIOLOGY		6								
EMERGENCY MED. TECH.		7,0								
DIETARY TECH.										
INHALATION THERAPY		0,6			6					
MEDICAL LAB. TECH.						6				
NUCLEAR MED. TECH.		0,6				6				
X-RAY TECH.							6			
DENTAL ASSISTANT							6			6
HEALTH ASSISTANT										6
RADIOLOGY TECH.					0					6
ANESTHESIOLOGY TECH.		6.0								
OPERATING ROOM TECH.										6
RESPIRATORY THERAPY						0				
MENTAL HEALTH TECH.			6							

PROPOSED (NO FINAL PLANS YET)
HOSPITAL FAC. USED (IN OPERATION)
COUNTY POLICE AND FIRE ACADEMY USED (IN OPERATION)

Table 1.2

TRADE AND TECHNOLOGIES

	ALLEGHENY NORTH	BUCKS	HARRISBURG	LEHIGH	LUZERNE	MONTGOMERY	NORTHAMPTON	WESTMORELAND
ARCHITECTURE DES. TECH.							1	
AUTOMOTIVE TECH.	1		0	0				
BUILDING CONSTR. TECH.	1							
CHEMICAL LAB. TECH.		0						
CIVIC TECH.				1				
COMPANY APPRENTICESHIP						4		
CONSTRUCTION ELECT.					1			
DRAFTING TECH.				1			0,1	
ELECTRICAL TECH.				1			1	
ENVIRONMENTAL CONTROL				0,1				
GRAPHIC ARTS							1	
HEATING & AIR COND.	1							
INDUSTRIAL CHEMISTRY		0						
MACHINE DESIGN							1	
MACHINE SHOP				1				
PLUMBING & HEATING				0,1	1		0	
WELDING	1							1

KEY:

0 = PROPOSED
1 = AVTS
4 = OUTSIDE RESOURCES (MISC.)

Table 1.3

OTHER INSTRUCTIONAL PROGRAMS

	ALLEGHENY NORTH	BEAVER	BUTLER	DELAWARE	LUZERNE	MONTGOMERY	NORTHAMPTON	WILLIAMSPORT
ACCOUNTING SYSTEMS TECH.	1							
BANKING						4		
CAREER SECRETARY	1							
CRIMINOLOGY			2					
DATA PROCESS. (COMP. SCI.)	1						1	5
HOTEL & RESTAURANT				1				
INSURANCE BROKERS						4		
INTERIOR DESIGN					0			
POLICE						4		
PROF. PILOT		3						
RETAIL MARKETING	1							
WASTE TREATMENT						4		

KEY:

0 = PROPOSED

1 = AVTS

2 = UNIVERSITY, COLLEGE, OR COMMUNITY COLLEGE

3 = AIRPORT

4 = OUTSIDE SOURCES (MISC.)

5 = TAUGHT AT PRISON

Table 2

AREA VOCATIONAL-TECHNICAL SCHOOLS (AVTS)

KEY:

X = EXISTING
O = PROPOSED

	ADVANCED PLACEMENT	AGRICULTURE	APPRENTICE TRAINING	AUDIO-VISUAL	AUTOMOTIVE	BUILDING TRACES	CIVIL TECHNOLOGY	COLLEGE CREDIT COURSES	DATA PROCESSING	DENTAL PROGRAMS	DRAFTING	ELECTRICAL TRADES	ENVIRONMENTAL TRADES	FIRE TRAINING	FOOD SERVICE	FOUNDRY PRACTICE	G.E.D.	HEALTH SERVICES	HEATING, VENT, AIR COND.	INDUSTRIAL TECHNOLOGY	INSTRUMENTATION	JOINT ADVERTISING	MAINTENANCE TECHNOLOGY	METALLURGY	NUTRITION	PLUMBING	PRACTICAL NURSING	SPECIAL EDUCATION	TEACHER CERTIFICATION	VITAL	WELDING
ALTOONA																				o	x										
BETHLEHEM					x	o			o		o								o												
CENTRAL CHESTER																											x				
CLEARFIELD																		x									x				
CRAWFORD																	x	x													
CUMBERLAND-PERRY						o												x													o
DELAWARE										x					x														o	x	
EASTERN NORTHAMPTON				x	x																						x				
ERIE														o				x							o						
FAYETTE																											x				
GREATER JOHNSTOWN							x				x													x							
LEHIGH	x							x				o	o									x	o								
LENAPE																												x			
NORTHUMBERLAND		o							x																						
SOMERSET																	x														
WILKES-BARRE			x									x														x					
YORK																											x				

TOTAL NO. IN PENNSYLVANIA: 72
TOTAL NO. IN SAMPLE: 72
NUMBER OF RESPONDENTS: 54

NO. WITH COOPERATIVE PROGRAMS: 14
PROGRAMS IN PLANNING STAGE: 13
NO. SHARING FACILITIES: 15

BEST COPY AVAILABLE

Table 3

PROPRIETARY SCHOOLS OFFERING THE ASSOCIATE DEGREE

PROGRAMS	ART INSTITUTE OF PITTSBURGH	DEAN INST. OF TECHNOLOGY	PITTSBURGH INSTITUTE OF AERONAUTICS	THE WILLIAMSON SCHOOL
AIRCRAFT/WELDING			2	
AIRFRAME & POWER PLANT REVIEW			2	
AVIATION MAINTENANCE TGCH.			0,2	
COMMERCIAL ART	2			
GRADUATE PROGRAM IN COMMERCIAL ART	0,2			
DRAFTING		0,1		
ELECTRICAL		0,1		
ELECTRICAL POWER TECH.				2
METALLURGICAL		0,1		
WELDING		0,1		

KEY:

0 = PROPOSED
1 = AVTS (COOP. INSTITUTION)
2 = UNIVERSITY, COMMUNITY COLLEGE, COLLEGE (COOP. INSTITUTION)

TOTAL NUMBER IN PENNSYLVANIA:	37	NUMBER WITH COOPERATING PROGRAMS:	4
TOTAL NUMBER IN SAMPLE:	37	PROGRAMS IN PLANNING STAGE:	4
NUMBER OF RESPONDENTS:	37	NUMBER SHARING FACILITIES:	6

Table 4

PRIVATE (NONDEGREE) TRADE AND BUSINESS SCHOOLS

Key:
0 = PROPOSED
1 = AVTS
2 = UNIVERSITY, COLLEGE, OR COMMUNITY COLLEGE
5 = TAUGHT AT PRISON
6 = HOSPITAL FACILITY
8 = PRIVATE TECHNICAL, TRADE, OR BUSINESS SCHOOL

	BREEDEN SCHOOL OF WELDING	FASHION ACADEMY OF PITTSBURGH	FRANKLIN SCHOOL OF SCIENCE & ARTS	PENNSYLVANIA REHABILITATION CENTER	PITTSBURGH TECHNICAL INSTITUTE	TECHNICIAN TRAINING SCHOOL	THOMPSON INSTITUTE
AIR CONDITIONING						0,2	
AUTOMOTIVE			8				
BRICKLAYING						0,2	
CAREER RESOURCE CENTER				0,1			
DENTAL ASSISTANT			2				
ELECTRICITY						0,2	
ENGINEERING REVIEW					2		
IN-PRISON PROGRAM (WELDING)	0,5						
INSURANCE					2		
MEDICAL ASSISTANT			8				
MEDICAL SECRETARY						0,2	6
MEDICAL TECHNICIAN			6				
PILOT OCCUPATIONAL PROGRAM FOR SLOW LEARNERS							
PRACTICAL SHOP EXPERIENCE FOR ENGINEERING TECHNICIANS							
TEXTILE ANALYSIS (MINI-COURSE)		0					
WELDING						0,2	
X-RAY TECHNICIAN			6				

TOTAL NUMBER IN PENNSYLVANIA: 153
TOTAL NUMBER IN SAMPLE: 141
NUMBER OF RESPONDENTS: 77
INSTITUTIONS CLOSED: 7
NONDELIVERABLE: 14
NUMBER WITH COOPERATIVE PROGRAMS: 6
PROGRAMS IN PLANNING STAGE: 4
NUMBER SHARING FACILITIES: 4

Table 5

PRIVATE JUNIOR COLLEGES

Key:

0 = PROPOSED
2 = UNIVERSITY, COLLEGE, COMMUNITY COLLEGE
4 = OUTSIDE SOURCES (MISC.)
6 = HOSPITAL

	ELLEN CUSHING	HARCUM	KEYSTONE	LACKAWANNA	MANOR	MT. ALOYSIUS	NORTHEASTERN CHRISTIAN	PIERCE	PA. JUNIOR COLLEGE OF MEDICAL ARTS	PINEBROOK	VALLEY FORGE MILITARY ACADEMY	UNITED WESLEYAN
ALLIED HEALTH					0							
ANIMAL TECH.		2										
BUSINESS MANAGE.								4				
CHRISTIAN SERVICE - SECRE. SCI.												2
CONTINUING EDUCATION			2	2								
CRIMINOLOGY						2						
EARLY CHILDHOOD		2										
FLOATING COLLEGE						0						
NURSING						6						
OCCUPATIONAL THERAPY						6						
OPTEMETRIC ASSISTANT												
PARA-MEDICAL ASSISTANT									6			
SEMESTER ABROAD		2										
SUMMER ENRICHMENT											4	
SUMMER MAKE-UP H.S.											4	

TOTAL NUMBER IN PENNSYLVANIA: 12
TOTAL NUMBER IN SAMPLE: 12
NUMBER WITH COOPERATIVE PROGRAMS: 8
PROGRAMS IN PLANNING STAGE: 2
NUMBER SHARING FACILITIES: 6

Table 6

COMPREHENSIVE HIGH SCHOOLS

PROGRAM	EXISTING NUMBER OF PROGRAMS	PROPOSED NUMBER OF PROGRAMS
HEALTH FIELD		
CANDY STRIPERS	1	
HEALTH ASSISTANT	3	
MEDICAL ASSISTANT	1	
NURSES AIDE	1	
TECHNICAL TRAINING		
APPLIANCE REPAIR	2	
AUTO BODY REPAIR	3	
AUTO MECHANICS	2	
BUSINESS DATA PROCESSING	1	
COSMETOLOGY	3	
DATA PROCESSING	4	
DIESEL MECHANICS	1	
DIVERSIFIED OCCUPATIONS	5	1
ELECTRONIC SCIENCE	1	
INDUSTRIAL ELECTRONICS	1	
MACHINE SHOP	4	
OFFICE MACHINES	1	
RADIO/TV	1	
SCIENTIFIC DATA PROCESSING	1	
VOCATIONAL AGRICULTURE	1	
BUILDING CONSTRUCTION		
AIR CONDITION & HEATING	1	
BUILDING MAINTENANCE	3	
CARPENTRY	3	
DRAFTING AND DESIGN TECH.	3	
ELECTRONICS	1	
ELECTRICAL OCCUPATIONS	3	
MASONARY	3	

Table 6 (cont'd)

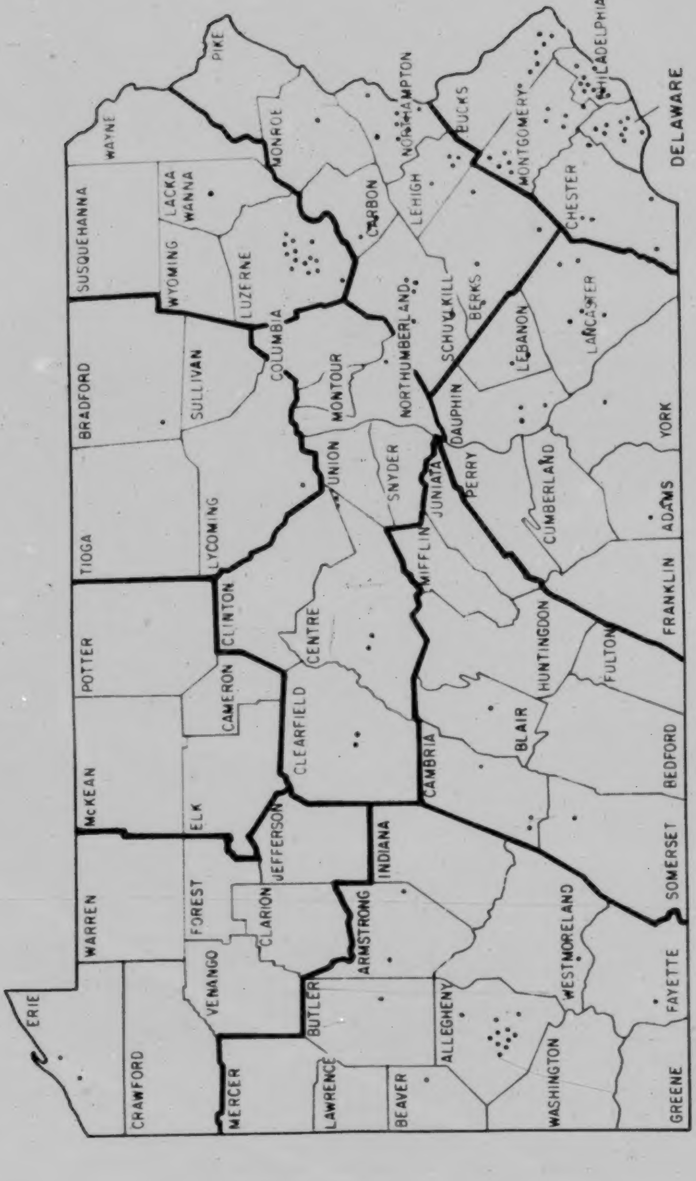
PROGRAM	EXISTING NUMBER OF PROGRAMS	PROPOSED NUMBER OF PROGRAMS
MILLWORK & CABINET MAKING	2	
PLUMBING & HEATING	1	
SHEET METAL	1	
WELDING	3	
ALLIED ART FIELDS		
ART	1	
COMMERCIAL ART	3	
GRAPHIC ARTS	4	
FLORICULTURE	2	
HORTICULTURE	1	
INDUSTRIAL ARTS	1	
PAINTING	2	
PATTERN MAKING	1	
TEXTILES	2	
OTHER EDUCATIONAL PROGRAMS		
ADULT EDUCATION	1	
ADVANCED EDUCATION	11	1
ALTERNATIVE SCHOOL PROJECT	1	
AUDIO-VISUAL TECHNOLOGY PROGRAMS	1	
AVTS	46	1
BUSINESS MANAGEMENT	2	
CONTINUING EDUCATION	4	
COOPERATIVE EDUCATION	7	
DISTRIBUTIVE EDUCATION	2	
DRIVER EDUCATION	3	
EARLY ADMISSIONS	3	
E.S.E.A. TITLE I	1	
FOOD PREPARATION (HOME ECONOMICS)	2	
FOOD TRADES	2	
GIFTED	5	
HANDICAPPED PROGRAM	1	
IN-SERVICE PROGRAMS	1	

Table 6 (cont'd)

PROGRAM	EXISTING NUMBER OF PROGRAMS	PROPOSED NUMBER OF PROGRAMS
LIBRARY INTERNSHIP	1	
MATERIAL HANDLING	1	
OFFICE PRACTICES	2	
PAIRED SCHOOL	1	
PRE-VOCATIONAL GUIDANCE		1
SPECIAL EDUCATION	5	
STUDENT EXCHANGE	1	
STUDENT TEACHING	6	
STUDENT VOLUNTEER PROGRAM		1
TEACHER'S AIDE	1	
TECHNICAL STUDIES	1	
TRAINING RETARDED	1	
URBAN CAREER ED. PROGRAM	1	
VOCATIONAL TECHNICIAN	4	

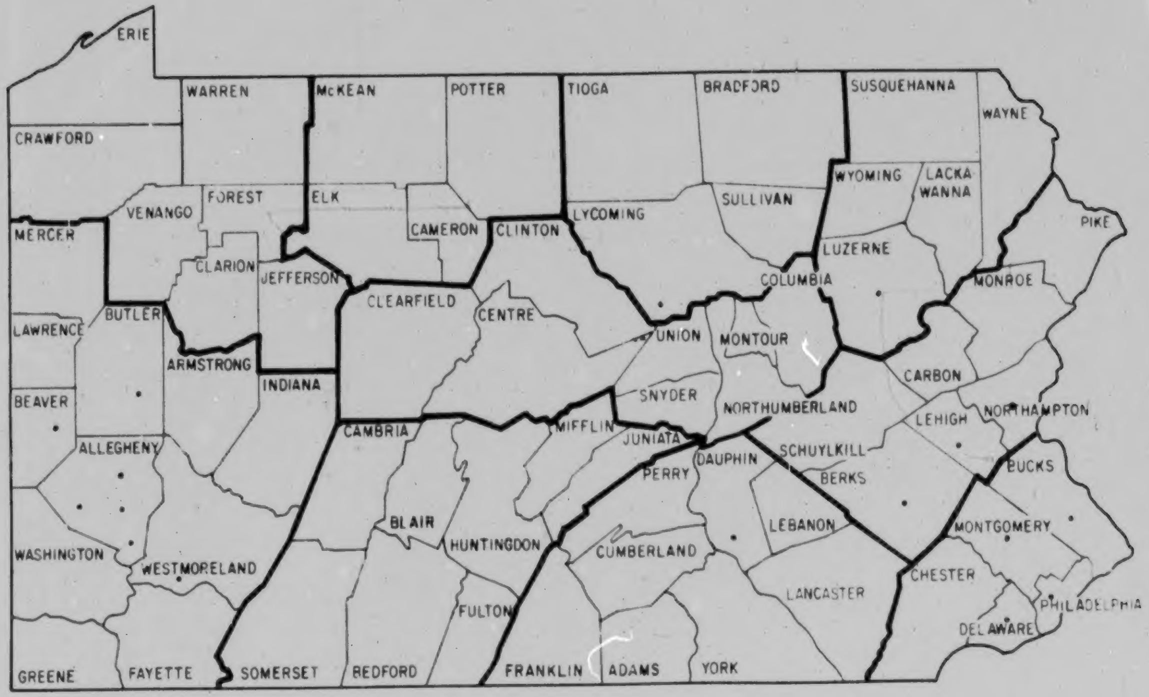
TOTAL NUMBER IN PENNSYLVANIA:	712	NUMBER WITH COOPERATIVE PROGRAMS:	72
TOTAL NUMBER IN SAMPLE:	235	NUMBER IN PLANNING STAGE:	5

NUMBER OF RESPONDENTS: 170


ERIE
CRAWFORD
MERCER
WARREN
VENANGO
FOREST
McKEAN
ELK
POTTER
CAMERON
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
PIKE
WYOMING
LACKA WANNA
LUZERNE
SULLIVAN
LYCOMING
CLINTON
CLEARFIELD
JEFFERSON
CLARION
BUTLER
LAWRENCE
BEAVER
ALLEGHENY
ARMSTRONG
INDIANA
WASHINGTON
GREENE
FAYETTE
WESTMORELAND
SOMERSET
CAMBRIA
BLAIR
BEDFORD
HUNTINGDON
FULTON
FRANKLIN
CENTRE
MIFFLIN
JUNIATA
PERRY
CUMBERLAND
ADAMS
UNION
SNYDER
MONTOUR
COLUMBIA
NORTHUMBERLAND
DAUPHIN
YORK
LEBANON
LANCASTER
SCHUYLKILL
BERKS
CHESTER
DELAWARE
CARBON
LEHIGH
MONROE
NORTHAMPTON
BUCKS
MONTGOMERY
PHILADELPHIA

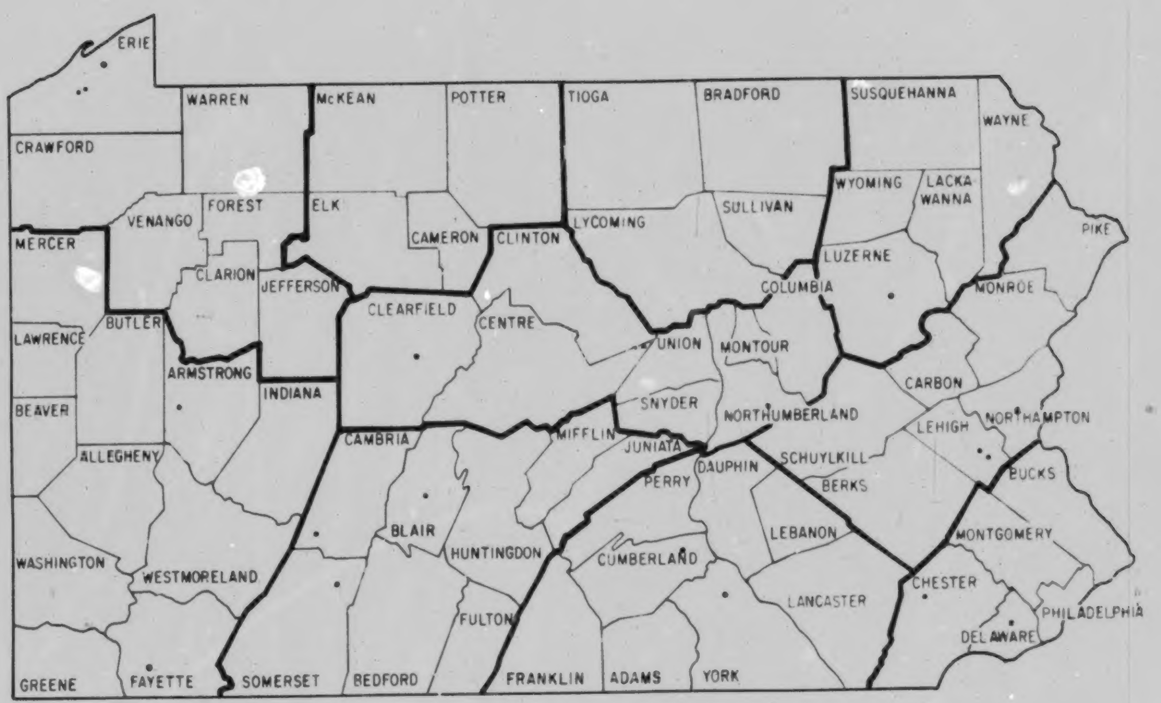
COOPERATING SCHOOLS: COMPOSITE MAP

FIGURE 1


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
WYOMING
LACKA WANNA
VENANGO
FOREST
ELK
LYCOMING
SULLIVAN
PIKE
MERCER
CAMERON
CLINTON
LUZERNE
CLARION
JEFFERSON
COLUMBIA
MONROE
CLEARFIELD
CENTRE
BUTLER
UNION
MONTOUR
LAWRENCE
ARMSTRONG
CARBON
INDIANA
SNYDER
NORTHUMBERLAND
BEAVER
NORTHAMPTON
LEHIGH
CAMBRIA
MIFFLIN
JUNIATA
ALLEGHENY
SCHUYLKILL
DAUPHIN
BUCKS
PERRY
BERKS
BLAIR
LEBANON
MONTGOMERY
WASHINGTON
HUNTINGDON
CUMBERLAND
WESTMORELAND
CHESTER
LANCASTER
PHILADELPHIA
FULTON
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

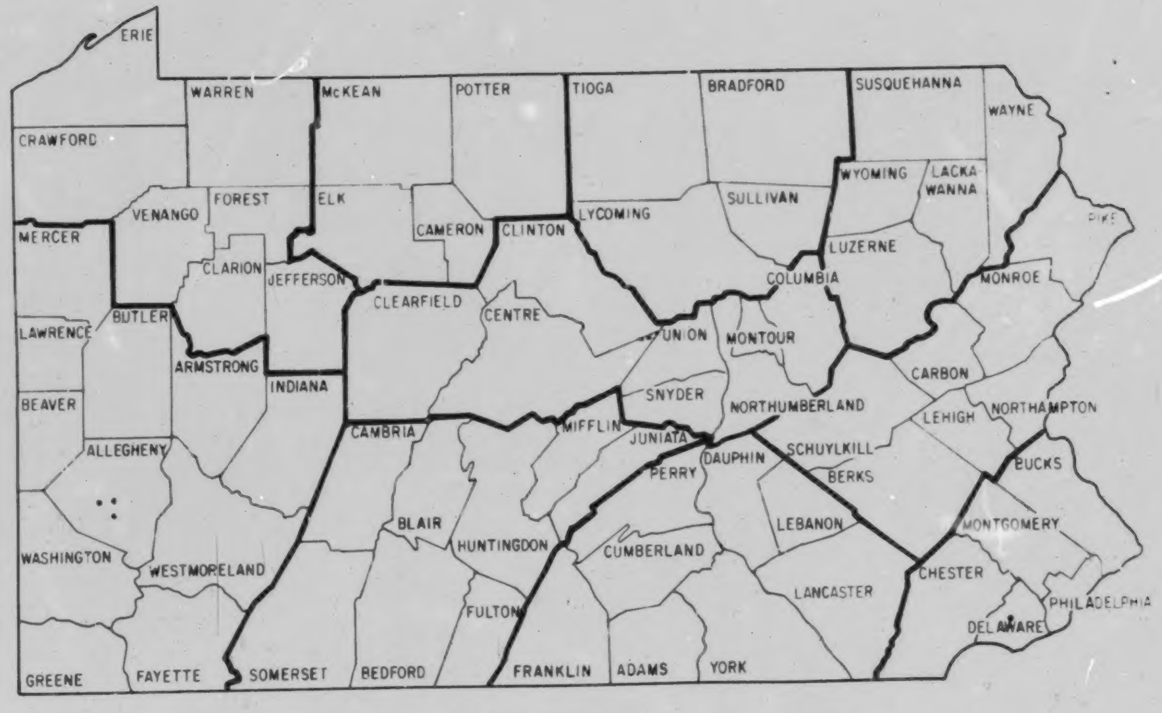
COOPERATING COMMUNITY COLLEGES

FIGURE 2


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
WYOMING
LACKA WANNA
VENANGO
FOREST
ELK
SULLIVAN
LYCOMING
PIKE
MERCER
CAMERON
CLINTON
LUZERNE
CLARION
JEFFERSON
COLUMBIA
MONROE
CLEARFIELD
CENTRE
BUTLER
LAWRENCE
UNION
MONTOUR
ARMSTRONG
INDIANA
CARBON
BEAVER
SNYDER
NORTHUMBERLAND
LEHIGH
NORTHAMPTON
CAMBRIA
MIFFLIN
JUNIATA
ALLEGHENY
SCHUYLKILL
DAUPHIN
PERRY
BERKS
BUCKS
BLAIR
LEBANON
MONTGOMERY
HUNTINGDON
WASHINGTON
WESTMORELAND
CUMBERLAND
CHESTER
LANCASTER
PHILADELPHIA
FULTON
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

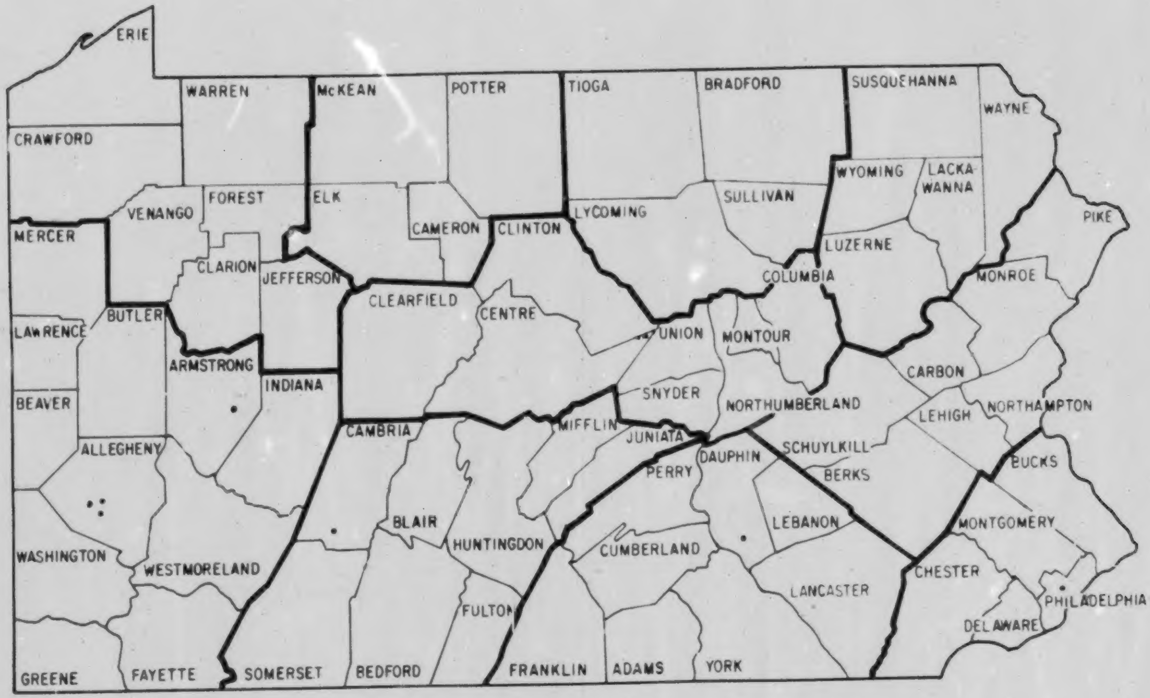
COOPERATING AREA VOCATIONAL-TECHNICAL SCHOOLS (AVTS)

FIGURE 3


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
WYOMING
LACKAWANNA
VENANGO
FOREST
ELK
CAMERON
CLINTON
LYCOMING
SULLIVAN
PIKE
MERCER
LUZERNE
CLARION
JEFFERSON
CLEARFIELD
COLUMBIA
MONROE
CENTRE
LAWRENCE
BUTLER
UNION
MONTOUR
ARMSTRONG
CARBON
INDIANA
SNYDER
NORTHUMBERLAND
NORTHAMPTON
BEAVER
LEHIGH
CAMBRIA
MIFFLIN
JUNIATA
ALLEGHENY
DAUPHIN
SCHUYLKILL
BUCKS
PERRY
BERKS
BLAIR
LEBANON
MONTGOMERY
HUNTINGDON
CUMBERLAND
WASHINGTON
WESTMORELAND
CHESTER
LANCASTER
PHILADELPHIA
FULTON
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

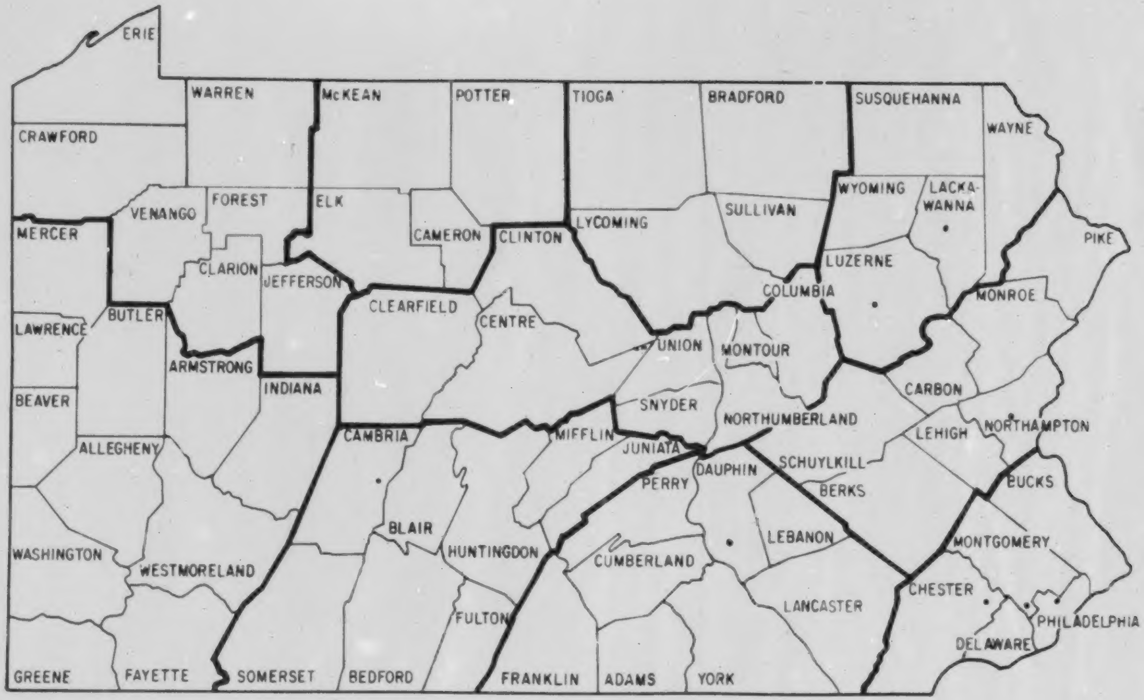
COOPERATING ASSOCIATE DEGREE-GRANTING PROPRIETARY SCHOOLS

FIGURE 4


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
WYOMING
LACKA WANNA
PIKE
VENANGO
FOREST
ELK
CAMERON
CLINTON
LYCOMING
SULLIVAN
LUZERNE
MERCER
CLARION
JEFFERSON
COLUMBIA
MONROE
CLEARFIELD
CENTRE
BUTLER
LAWRENCE
UNION
MONTOUR
ARMSTRONG
INDIANA
CARBON
SNYDER
NORTHUMBERLAND
BEAVER
NORTHAMPTON
LEHIGH
CAMBRIA
MIFFLIN
JUNIATA
ALLEGHENY
SCHUYLKILL
DAUPHIN
PERRY
BERKS
BUCKS
BLAIR
LEBANON
MONTGOMERY
WASHINGTON
HUNTINGDON
CUMBERLAND
WESTMORELAND
CHESTER
LANCASTER
PHILADELPHIA
FULTON
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

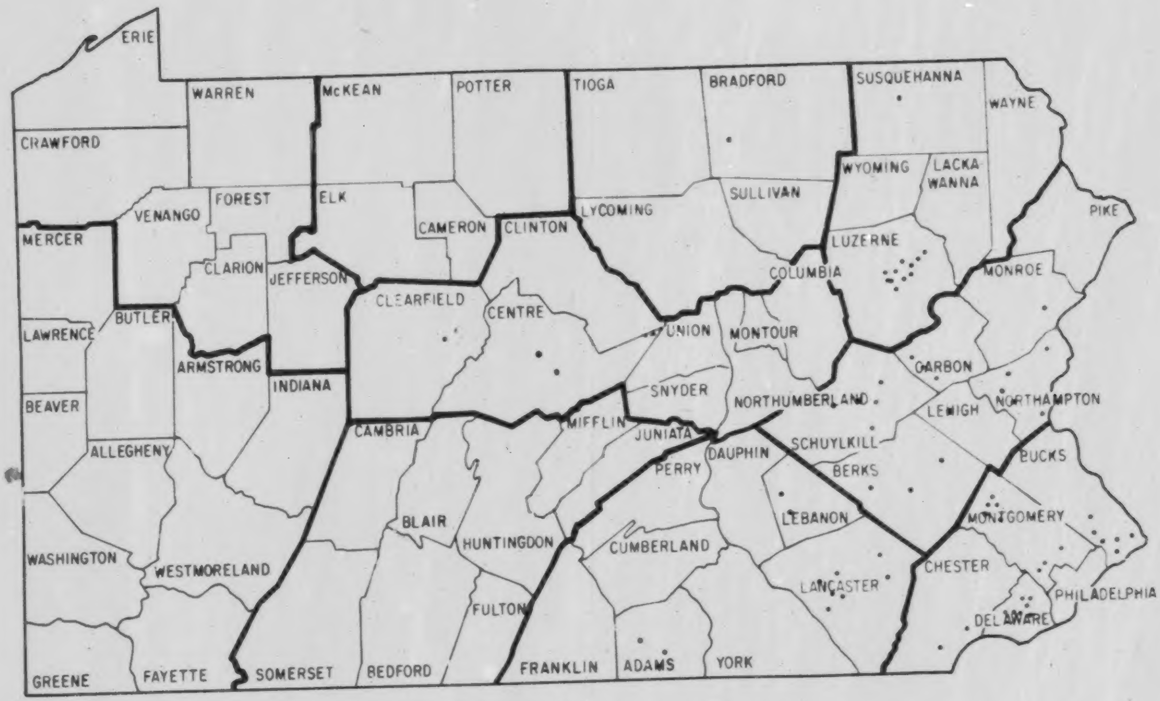
COOPERATING NONDEGREE-GRANTING PROPRIETARY SCHOOLS

FIGURE 5


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
FOREST
ELK
WYOMING
LACKA-
WANNA
VENANGO
MERCER
CAMERON
CLINTON
LYCOMING
SULLIVAN
PIKE
LUZERNE
CLARION
JEFFERSON
COLUMBIA
MONROE
CLEARFIELD
LAWRENCE
BUTLER
CENTRE
UNION
MONTOUR
ARMSTRONG
INDIANA
CARBON
BEAVER
SNYDER
NORTHUMBERLAND
CAMBRIA
LEHIGH
NORTHAMPTON
MIFFLIN
JUNIATA
ALLEGHENY
SCHUYLKILL
DAUPHIN
PERRY
BERKS
BUCKS
BLAIR
LEBANON
MONTGOMERY
WASHINGTON
HUNTINGDON
CUMBERLAND
WESTMORELAND
CHESTER
LANCASTER
FULTON
PHILADELPHIA
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

COOPERATING PRIVATE JUNIOR COLLEGES

FIGURE 6


ERIE
WARREN
McKEAN
POTTER
TIOGA
BRADFORD
SUSQUEHANNA
WAYNE
CRAWFORD
WYOMING
LACKAWANNA
FOREST
ELK
VENANGO
SULLIVAN
LYCOMING
CAMERON
CLINTON
PIKE
MERCER
LUZERNE
CLARION
JEFFERSON
COLUMBIA
MONROE
CLEARFIELD
CENTRE
BUTLER
LAWRENCE
UNION
MONTOUR
ARMSTRONG
CARBON
INDIANA
SNYDER
NORTHUMBERLAND
NORTHAMPTON
BEAVER
LEHIGH
CAMBRIA
MIFFLIN
JUNIATA
SCHUYLKILL
ALLEGHENY
DAUPHIN
BUCKS
PERRY
BERKS
LEBANON
MONTGOMERY
BLAIR
HUNTINGDON
CUMBERLAND
WASHINGTON
WESTMORELAND
CHESTER
LANCASTER
PHILADELPHIA
FULTON
DELAWARE
GREENE
FAYETTE
SOMERSET
BEDFORD
FRANKLIN
ADAMS
YORK

COOPERATING COMPREHENSIVE HIGH SCHOOLS

FIGURE 7

COOPERATION AND COORDINATION AMONG SECONDARY AND POSTSECONDARY VOCATIONAL EDUCATION: THE MASSACHUSETTS STORY

Charles H. Buzzell
Associate Commissioner
and
Vincent P. Lamo
Director, Project CAREER
Division of Occupational Education
Massachusetts Department of Education

As we view from an objective distance the parameters within which American education operates, it becomes clear that a preoccupation with accountability permeates our educational concerns. In looking at the concept of cooperation and coordination among secondary and postsecondary schools, the economic benefits to be derived by both institution and student makes for a more accountable system of public education. With career education being promoted nationwide, the need for articulated programs (cooperation and coordination) becomes an inexorable pursuit of educational managers.

The Need for an Articulation Process

If career education is to be looked upon as a life-long process, the barriers which separated our educational system into discrete functional entities must be eliminated.

Gillie and Miller[1] cite a study by Garbin in which a sample of community college students enrolled in occupational programs pinpointed the grade in school in which a decision was reached concerning present occupational plans (see Table 7). It is obvious from this study that occupational decisions are not made at a given moment but rather cover a wide spectrum of time. These data would support the position which would allow students to take some courses at a community college as early as the eleventh or twelfth grade. Conversely, those students who had not made their decisions as late as the sophomore year in college would need different services and programs.

Smith further supports the need for articulation in discussing the process developed at Florida's Miami-Dade Junior College. He states:

> During the past three years, it became apparent that a large number of high school graduates were transferring to the junior college either undecided as to their educational goals or unaware as to what their selected programs of study entailed. Many young men and women came to the college totally unprepared to enroll in the required courses of their chosen program.[2]

---

[1] Angelo C. Gillie, and Aaron J. Miller, *A Suggested Guide for Post-Secondary Vocational and Technical Education* (Columbus: The Center for Vocational and Technical Education, 1970).

[2] Albert K. Smith, "Bridging the Gap--High School to Community College," *Junior College Journal* 40 (1970): 34.

Reynolds is quoted in *Breaking the Access Barriers* as saying that program developers "should consider the years preceding junior college for clues as to what the junior college should be, or in order to suggest needed changes in high school programs."[3]

The Process of Articulation

Manley, in discussing articulation of the community colleges and technical institutes and the elementary and secondary schools of North Carolina, speaks of the need for providing articulation of subject matter between secondary and postsecondary institutions. He states:

> Since educational and career development is a process rather than an event . . . Articulated effort should be a reality in order to provide the continuum of education necessary for each student to develop to his full potential without unnecessary duplication of instruction and delay in attaining his educational and career objectives.[4]

---

[3] Leland L. Medsker and Dale Tillery, *Breaking the Access Barriers* (New York: McGraw-Hill, 1971), p. 70.

[4] Fred W. Manley, *Articulation between North Carolina's Public System of Elementary and Secondary Schools and Public System of Technical Institutes and Community Colleges* (Raleigh: North Carolina Research Coordinating Unit in Occupational Education, ED 051-375, 1970).

Articulation in this context develops what Olson calls "a network of connected procedures that will allow development to continue through life."[5] The community college becomes the bridge in gapping the chasm between career goal objectives and the realization of that goal. It can take Student A, in our example, and provide him with the continued educational experiences he needs to achieve his self-determined goal. With Student B, the community college's role becomes more complex. Here the college must provide a series of services (counseling, career exploration, remedial courses) and programs (designed for entry-level skill development in any one of several areas within its program parameters).

The complexity of the community college's role relative to meeting the needs of Student B can be assessed if we look at the specific kinds of services and programs mentioned above. For Student B, the community college should continue the process of career exploration, which conceivably started in the seventh grade with vocational exploration and continued through the twelfth grade with student experiences in occupational clusters. Somewhere along this career spectrum our Student A was capable of making a career decision and began to pursue employment skills. Student B, despite relatively similar experiences, did not come to that career-decision moment for any of a variety of reasons. Through further opportunities in career exploration via experiences in different occupational areas and through effective counseling (possibly using an interactive computerized guidance system), the community college can further assist Student B in his decision-making process.

---

[5] Jerry C. Olson, "Decision Making Power: Sign of Articulation," *American Vocational Journal* 46 (1971): 32.

The effectiveness of all this would be significantly enhanced if, during his high school education, Student B were able to see the possibilities open to him at the postsecondary level. Then the community college might have been able to relate to the student's needs sooner or with greater relevance if it had had some working relationship with the feeder school system.

In short, the community college should cease to function as an autonomous sub-system of the school district and become an integral part of it. Its integration should be flexible and designed for maximum response to student needs. It may require completion of high school or, as Schrupp[6] discusses, allow eleventh and twelfth grade students to attend and earn college credit. The perspective on articulation between the community college and the school system taken here is one of integration, coordination, and planning.[7]

---

[6] Harold A. Schrupp, "Opening the Door a Little Wider: High School Students Attending Junior College," (Seminar paper, ED 051-816, June 1971).

[7] Integration is the development of a system composed on interrelated components and reciprocal student services. Coordination is the process whereby the needs of the community are looked at from a higher vantage point and mutually viewed in order that attempts to meet those needs are the product of effective programming with minimal unnecessary duplication. Planning is the process which provides articulation with a "dynamic recycling of sequences or phases that need to occur as changes in people and education programs take place. (Manley, *Articulation Between North Carolina's Public System*, p. 1).

The Massachusetts Story

While it would be nice to suggest that Massachusetts has met its challenge of maximizing its total educational systems and thereby imply that it has achieved the highest level of cooperation and coordination among institutional types, it would be a misrepresentation of fact. We have not solved all of these problems encountered in dealing with a massive, billion-dollar effort involving at some time, in some way, every citizen of the state. We have numerous areas which require constant evaluation and modification if we are to realize the promise of education. Among these areas of concern is the area of vocational education and how the different levels of this delivery system can be coordinated. However, it would be equally misleading to imply we, as a state, have been insensitive to the demand for improving the educational system. Specifically, there are in place a number of efforts which deal with the topic of this paper. The first of these efforts to be discussed could be described as a "management grid"--designed to differentiate the areas of responsibility for the State Board of Education and the State Board of Higher Education. The problem of "institutional overlap" is more than just a regional phenomenon, as can be seen by the following:

> Occupational education has been suffering from interstitialitis for quite some time because the kinds of institutions in which it is offered vary from secondary to postsecondary levels with the great majority of occupational programs being offered in secondary schools. But the condition is worsening as an increasingly larger number of programs are being developed in postsecondary institutions,

> both public and private. This makes it increasingly more difficult to place occupational education in one level of education.
>
> Further confounding the issue is that some programs are offered in secondary schools in one region of the state and in postsecondary institutions in some other region of the state. Therefore, occupational education has become an interstititial type of offering and clearly does not fit within the traditional rubric of secondary and postsecondary education.[8]

In order to deal with the obvious difficulties encountered when occupational education is delivered simultaneously in two institutional levels, both the Boards of Education and Higher Education established a set of procedures in 1971 which were the first formal efforts of articulation within the state. It has also been suggested that this effort has fostered the subsequent cooperative and coordinative efforts that have grown within the state. The procedure describes those efforts which are the responsibility of the Boards of Education and Higher Education, and those which require the mutual involvement of both boards.

Simply stated, the intensity and location of the postsecondary occupational program (below the baccalaureate degree) determines whether the responsibility is retained by the Board of Education, the Board of Higher Education, or shared by both boards. Programs for which a secondary diploma or its equivalent are required, which will be offered within the area vocational school and which will be conducted at a pace appropriate for grades 13 and/or 14, are classified as type A programs. These programs require the mutual approval of both boards. Programs which do not require a diploma or its equivalent are offered within an area vocational school and are described as postsecondary because of the population they serve (students not enrolled as secondary students) are classified as type B programs and come under the Board of Education's jurisdiction.

---

[8] Angelo C. Gillie, "Articulation in Occupational Education," *The Fourth Annual Pennsylvania Conference on Postsecondary Occupational Education* (September 1973): 13-14.

While this arrangement provides an administrative framework which works, it does not answer all of the questions encountered. What is important, however, is that the Massachusetts educational establishment at the state level has been able to demonstrate that it is not only sensitive to the needs and benefits of cooperation, but able to achieve interactive and mutually beneficial policies.

SPECIFIC PROGRAMS

Project CAREER

The specific and technical description of this project has been covered in a number of other publications.[9] For that reason, the comments here will deal with the role this project can plan in bringing the secondary and postsecondary institutions together. Actually, the project provides a bridge which connects the elementary effort with the secondary and postsecondary efforts.

---

[9] Charles H. Buzzell, "Career Development in the Post-Secondary Institution," *American Vocational Journal* (May 1973).

Project CAREER has been able to analyze and specify the specific performances required of the encumbents in a selected number (115) of high-demand occupations within the state. It is able, by virtue of its computerization, to factor out all of the performances which are common to all of these occupations. This enables the elementary portion of the educational system to examine the commonalities of performance across a broad job spectrum. Now, in a formal way, elementary teachers committed to the awareness and exploratory needs of their students can describe how certain computational and communication skills, knowledges, and attitudes can, once achieved by a learner, be marketed in a variety of occupational settings.

The bridge connects what the learner receives at the elementary level with what follows at the secondary level. In the early secondary level, the student is exposed to those performances which "cluster" into broad families of occupations; i.e., transportation, communication, construction, etc. Here he sees that the acquisition of certain skills will provide him access to a large number of specific jobs within the "family." For example, the ability to perform linear measurement with a continuous ruler, or steel tape, is a necessary requirement of nearly every job classified within the construction family.

As the learner progresses through his high school years and is able to invest his time in acquiring more and more specific skills, knowledge, and understanding, he is obviously becoming more and more employable. What he needs and what Project CAREER can provide is a clear picture of appropriate marketable performances. What he does not need is an insensitive environment which forces him to continue to invest his time in the pursuit of performances he has already acquired. Such pursuit will obviously be at the expense of acquiring other and more appropriate performances.

The curricular connection Project CAREER can provide between the secondary level and the postsecondary level is obvious. Continued iterance of the computerized data bank will factor out those specific marketable performances which build upon those which have already been provided. In a way, what the project is able to do is carve out the "curricular turf" which can receive the focus of different levels of the educational system.

Another pay-off provided by this project is that it can provide appropriate awareness and exploratory and specific skill-training packages for the learner who is just initiating his occupational preparation at the postsecondary level. For us to assume that because a learner is eighteen years or older he is automatically ready to make a specific job choice would be giving support to the criticism that educators are insensitive to the developmental needs of learners.

The Education Cooperative

This cooperative effort, currently at the planning stage, is designed to weld together ten contiguous towns within the Greater Boston area. The purpose, as described in their abstract, is to deliver career awareness and orientation (including work study and cooperative education) opportunities for all in-school populations, K-14, by the end of the proposed three-year period. It further provides for occupational exploration and training opportunities for 20 percent of the high school and postsecondary populations when they enter school and specific training opportunities for an additional 30 percent of these populations.[10]

Even though a number of logistical questions must still be worked out, the project is an effort to bring together all of the elementary schools in the districts, the ten general high schools, two regional vocational high schools, a technical institute, and a community college. In terms of numbers to be served, the effort will be directed at 70,000 students within the first twelve grades and 190,000 adults, including the current post-secondary population. In all, this represents about 4.6 percent of the entire state population.

Project Interact

This federally funded project, involving a communitycollege and four regional vocational schools, is designed to isolate specific activities which these institutions can provide in collaborative ways for the region they collectively serve.

This study is largely focused on one of the regions within the state, but it also is involving two other regions in order to assess additional concerns. The hope is that the logistics which are worked out within the principal region will have broad application across the state. Some of the specific objectives are:

---

[10] SRS Consultants, Inc., "An Exploratory Study to Determine the Most Efficient Cooperative Approach to Occupational Education in the TEC Region," The TEC Plan for Occupational Education (September 1972).

1. To survey the present plant capabilities of the five schools in classrooms, science laboratories, workshops, libraries, audio-visual aids, and campus and grounds.

2. To determine the level of occupational programs which would be most appropriate on the secondary and postsecondary levels.

3. To determine, in the light of existing laboratories and workshops in the regional vocational schools, what additional laboratories, workshops, and facilities should be planned for the community college.

4. To determine which laboratories and workshops at the regional vocational schools might serve on a temporary basis to meet the needs of cooperative programs with the community colleges, thus allowing programs to get started in advance of planned construction.

5. To develop and construct a model for a variety of occupational fields which could provide each student with an opportunity for continuing occupational mobility and growth beginning in the regional vocational school and progressing to the community college, and possibly continuing to the baccalaureate level.

Project Edco

This is an activity whereby community college students accept specific skill training in the areas of electronics, machine shop, metal fabrication, and technical drafting at an area vocational school.

This instruction is then accepted as part of the community college student's program. Additional effects of this type of collaboratives are obvious. The interactions of faculty, the relationship among and between students, the exchange of equipment, and the exchange of teaching techniques are all expected to have a positive effect.

Facility Sharing

Two area vocational schools are providing the facilities for nearby community colleges. In one of the schools, the outstanding facilities of the food science program are made available. The obvious pay-off derived by the students is their use of the up-to-date equipment. Additional pay-off is also realized from "economy of scale," since the equipment is utilized to its maximum. We expect this program to continue; however, the demand for graduates and the interest of students may require additional capital investment.

In the second school, data processing was shared. Here, again, the pay-off to the learner is outstanding. As important a role as simulation plays in the instructional process, access to an on-line computer expands the learning outcomes to even greater degrees.

As important as these specific and formal relationships are to the individual learners involved, they have even greater importance for the state as a whole. The schools become models, exemplary in nature, for the rest of the state. They have broken trail, as it were, and now are good examples of cooperation and coordination.

Facility and Faculty Sharing

There are two formal examples of area vocational schools and community colleges joining together to share not only facilities but also staff. These two collaboratives have been able to work through numerous problems which lie hidden just below the surface and very often scuttle the best efforts of conscientious educators. In one of these collaboratives, the community college and the area vocational school have brought in a third partner, local industry. This is an arrangement which the state views as a necessary and positive move forward.

Advanced Standing Program

One of the most significant examples of cooperation and coordination between an area vocational school and a community college has been the development of what is called a "Career Mobility Program." This program allows students in the post-secondary program of the area vocational school to transfer into the community college and receive advanced standing. In some transfer programs, the student is given the equivalent of a full year's work.

Although on the surface this might appear to be an easily achieved objective, it was accomplished only after extensive interaction among members and administrations of the two facilities. Here, again, the importance of this accomplishment can be measured in a number of ways. Without question, the student benefits. In addition, the process has given to both institutions a benefit which neither would have received without the interaction. For example, both the community college and the area vocational school had to take a hard look at their course content. The result of this analysis was the achievement of greater returns in offerings to the student. The involvement of advisory groups in the content evaluation placed a focus upon appropriate outcomes as well as on how best to achieve these agreed-upon outcomes. Textbooks were reviewed, library selections were evaluated, and numerous pieces of hardware were examined. The interaction of staffs over these issues was also significant in reducing separatism.

The Cooperative Degree

The most noteworthy example of cooperation and coordination between the area vocational school and the community college is the cooperative degree program. In this program, the two institutions achieve the maximum measure of interaction. They grant a degree which bears the stamp of both. The significance of this achievement is not obvious. However, as one examines what has been achieved, one can begin to get a measure of the accomplishment. Each institution has, in fact, taken a position which formally states its willingness to share its degree-granting authority with another. The acceptance of credits from another institution, although significant, has been around for some time. On the other hand, the graduating institution has traditionally retained the right to affix its stamp to the graduate. The significance of a faculty moving from this traditional position to one of partnership with another institution is of major importance. It heralds the coming of greater involvement, greater flexibility, greater cost-effectiveness, and hopefully, the day when faculties will agree that it's not important how one acquired the ability to demonstrate an appropriate performance; it is only important that he be able to demonstrate it.

In summary, Massachusetts has made some progress in the use of coordination and cooperation as it attempts to deal with the needs of students. The achievements have, in some instances, been informal; in others, formal. In some situations, the forms of interaction are still a promise and have yet to realize the true measure of contribution to the learner. In other instances, major achievements can be measured. In all cases, we as educators are attempting to achieve a stance of more rational management because in education, as in other areas, we are confronted with unlimited wants and limited resources.

TABLE 7

GRADE IN SCHOOL IN WHICH PRESENT OCCUPATIONAL PLANS DECIDED AS INDICATED BY A NATIONAL SAMPLE OF JUNIOR COLLEGE STUDENTS ENROLLED IN OCCUPATIONAL PROGRAMS*

Grade in School	Number	Percent
Grade School	263	5.4
Junior High School (7-9)	420	8.6
Sophomore Year in High School	429	8.8
Junior Year in High School	638	13.1
Senior Year in High School	1,134	23.3
Period between High School and College	739	15.2
Freshman Year in Junior College	470	9.7
Sophomore Year in Junior College	183	3.8
Still Undecided	200	4.1
Don't Remember	387	8.0
TOTAL	4,863	100.0

---

*A. P. Garbin, "Post-Secondary Vocational-Technical Education: Some Considerations Relating to the Student," *National Conference on Post-Secondary Education* (Columbus: The Center for Vocational and Technical Education, Leadership Series 28, February 1970), pp. 3-46.

(Taken from Gillie and Miller, *A Suggested Guide for Post-Secondary Vocational and Technical Education.*)

ADDITIONAL REFERENCES

American Vocational Association. "Report of the American Vocational Association Task Force on Career Education." Portland, Oregon: December 3, 1971

Law, Gordon F. *Contemporary Concepts in Vocational Education*. Washington, D.C.: The American Vocational Association, Inc., 1971

Marland, Sidney P. "Career Education." Address presented at the National Association of Secondary School Principals meeting, Houston, Texas, January 23, 1971.

Modderno, Alexander S. "Articulated Programming Opens Collegiate Doors to Minority Students." *American Vocational Journal* 46 (1971): 46-49.

COOPERATION AND COORDINATION BETWEEN SECONDARY AND POSTSECONDARY VOCATIONAL-TECHNICAL AND ADULT EDUCATION: THE OKLAHOMA STORY

Francis Tuttle
State Director
Oklahoma State Department of
Vocational and Technical Education

and

Arch Alexander
Deputy Director
Oklahoma State Department of
Vocational and Technical Education

Some states are fortunate to have all facets of education under the purveyance of one agency. Such states have a head start over the others because a single state educational agency has cooperation and coordination built into its administrative structure. At the opposite end of the spectrum are states like Oklahoma, where several agencies have overlapping responsibilities for certain facets of public education.

Oklahoma's electorate adopted a constitutional amendment in 1941, creating the Oklahoma State Regents for Higher Education and giving the regents responsibility for all postsecondary education. The Oklahoma State Board of Education, the state's oldest educational agency, has responsibility for what has come to be known as common school education, that which is conducted by and through the public school districts of the state. Most public schools conduct adult education programs, some of which are quite elaborate and enroll thousands of students annually. When federal funds were provided for adult basic education, they were administered and supervised by the State Board of Education. This added to the complex problem of deciding which agency was to be responsible for adult education.

In 1967, Oklahoma's Legislature, in order to give greater emphasis to economic development through vocational education, created a separate State Board for Vocational Education and made it responsible for a new department of state government, the Department of Vocational and Technical Education. According to the provisions of the statute, the State Board of Vocational and Technical Education was responsible for all vocational and technical education within the state and was the sole state agency for administering federal funds for vocational education and manpower training for secondary and postsecondary students and for part-time and full-time adult students.

In Oklahoma, the situation is complicated because three agencies have been interpreted as having responsibility for a part of the action in vocational-technical and adult education--the State Regents for Higher Education, the State Board of Education, and the State Board of Vocational and Technical Education. With the retirement of several academically oriented junior college presidents and the creation of junior colleges in the state's major metropolitan areas, vocational education took on unprecedented growth in the junior colleges. At the same time, under the leadership of the State Department of Vocational and Technical Education, a new local educational agency, the area vocational-technical school, began to develop and grow. The area school offered occupational training to secondary students and to part-time and full-time adult students.

Simultaneous with the growth in area vocational-technical schools and the adoption of vocational education by the junior college family in Oklahoma, the adult basic education program began to whet the appetite of the state's under-educated adults for more comprehensive adult education and training programs. This led to the demand for greater diversity in adult educational offerings and the area schools moved to meet this demand.

At that time, the Department of Vocational and Technical Education was responsible for all vocational and technical education in the state, establishing standards and providing consultative, supportive, and supervisory services to all schools and colleges conducting vocational education programs. Therefore, a strong program of vocational education developed that was articulated at all levels--secondary, postsecondary, and full-time and part-time adult training.

As the vocational training program developed at all levels, critics who did not look below the surface began to hurl charges that the area schools were duplicating services and programs offered in the comprehensive high schools and in the junior colleges. The high school/area school duplication never developed because there was coordination and day-to-day contact between area schools and the comprehensive high schools.

If an interested party took more than a cursory look, without personal bias, at what the junior colleges and area schools were doing, it would be apparent that no real duplication existed because area schools and junior colleges were training for different skill levels. There was plenty of action for all agencies if public needs were to be met. It was also obvious to the educators, public representatives, and the legislative leaders who studied the situation, including the educational climate of the times, that with multi-agency responsibility for various facets of vocational-technical and adult education, major problems of duplication of programs and facilities could develop in the future. For example, the Department of Vocational and Technical Education could influence only the programs its funds helped to finance. A junior college was free to offer any vocational program supported by state higher education or local funds and sanctioned by the State Regents for Higher Education. On the other hand, the regents were bombarded with statements such as: "We can get state and federal vo-tech funds to support a training program in such-and-such a field if you'll approve our offering it." Comprehensive coordination and cooperation had to be achieved between the state's major educational agencies for vocational education.

Activated by the obvious need for greater coordination of activities regarding vocational and technical education, the staffs of the Regents for Higher Education and the State Board of Vocational and Technical Education held a series of meetings which extended over a number of months. After much deliberation, the staffs presented to their respective boards drafts of what was to be called a "Memorandum of Understanding." After several negotiation meetings, a final draft was approved by both boards which identified each agency's responsibilities in the areas of vocational and technical education. The State Legislature, impressed by the coordination and cooperative efforts made by the Regents for Higher Education and the State Board of Vocational and Technical Education, passed a resolution ratifying the action and suggested the efforts at cooperation serve as a model for other agencies.

The memorandum charges the State Board of Vocational and Technical Education to develop vocational and occupational education which involves manipulative skills, such as machine shop, printing, carpentry, stenography, and distributive education to be accomplished in programs provided by the high schools and area vocational-technical schools. Educational programs in practical nursing, cosmetology, and other skill-type programs which require the completion of a certain number of clock hours of training for licensing; programs in initial skill training, refresher skill training, and upgrading skill training for out-of-school youth and adults were delegated to the area schools.

The State Board of Vocational and Technical Education was responsible for cooperating with the industrial development efforts in the state by providing special training programs to support the activity and to continue to provide this assistance in the area of initial skill training for workers who were to be employed in new industry locations.

Funding activities, research services, consultant services, and administration of postsecondary vocational and technical education programs were other facets of the memorandum. Specificity of each agency's responsibility was developed only to the extent that it remained administratively feasible.

An effort had been made by the parties to the memorandum to provide for contingencies that might develop regarding expected future federal funding. However, the effectiveness of the memorandum was determined by the conscience and sincerity of the staffs of the two major state agencies in wanting to effect cooperation and coordination between vocational and technical educational programs.

While the memorandum was designed to clarify the roles of the regents and the board members, its value was the opening of lines of communication between the staffs of the two agencies. As a result of the memorandum, possibilities of coordination between secondary and postsecondary institutions and programs of vocational and technical education at all levels are limited only by the personalities of the individuals involved.

There has never been any real problem of coordination and cooperation between the staffs of the State Boards of Education and Vocational and Technical Education because the State Superintendent of Public Instruction is chairman of both boards and thus presents the advantage of the single state education facet (see first paragraph, page 48). Operations under the Memorandum of Understanding have been under way for only six months; therefore, it would be unfair to prejudge the success or failure of the cooperative agreement with such a brief experience factor.

For the states which do not have a single agency responsible for all public education, cooperation and coordination between agencies are vital if the vocational and technical education training needs of the public are to be served with maximum effectiveness. The Oklahoma story, in this regard, has not yet been completely told. Results are not complete. It remains to be seen whether all parties act with full faith in keeping the agreement. The agreement reduces the State Board of Vocational and Technical Education's responsibility for the quality of the vocational programs at the postsecondary level. It appears the regents practice laissez-faire responsibility for the quality of postsecondary vocational programs once they are approved; this represents a major departure from the type of consultative services that were formerly provided by the staff of the State Board of Vocational and Technical Education. It remains to be seen whether the quality of the training programs suffers under the new arrangement. The members of the jury in this case are the users of the products provided by the junior colleges--the business and industrial representatives of the state. What is to be decided is whether or not the cooperation and coordination agreement between the State Regents for Higher Education and the State Board of Vocational and Technical Education is working in the best interest of the people of the State of Oklahoma. If the jury finds in the affirmative, all states without a single educational agency can profit from the Oklahoma story.

COORDINATION OF SECONDARY AND POSTSECONDARY VOCATIONAL PROGRAMS

Lowell A. Burkett
Executive Director
American Vocational Association

Before launching into the subject of coordination of secondary and postsecondary vocational education, it might be well to clarify some terms used in this presentation. Vocational education is an educational program that has as its objective the preparation of people for employment in occupations that do not require a baccalaureate degree. It includes what is termed technical education in many places. Most everyone knows that secondary education encompasses grades 9, 10, 11, and 12, or in some cases, merely grades 10, 11, and 12. Postsecondary education is for those who have completed or left the secondary school.

Since the introduction of vocational education in the public schools around the beginning of this century, vocational education has been thought of as an educational program that cuts across many levels of education; however, it has become institutionalized in too many cases in recent years, thus segmenting, compartmentalizing, and fragmenting the program. Institutionalization has been the nemesis preventing the development of a total program of vocational education. It has prevented equitable distribution of resources, fostered professional snobbery, and failed to coordinate programs in order to serve all people of all ages in every community.

A historical perspective might be helpful in understanding Congressional intent and the dilemma we are in today. The Smith-Hughes Act of 1917 was intended to promote vocational education at the secondary level, as well as provide for part-time vocational education for out-of-school youth and adults. In the early years, the adult education and part-time continuing education program gained much attention and support, but later began to be neglected as much of the resources and support were directed to the secondary school. Other than private schools and endowed institutions, the post-secondary program was not widely available to provide pre-employment education and training. The adult employment extension program survived in some school systems due to public demand and strong vocational education leadership. Colleges and universities had little interest other than for teacher education.

The first push for postsecondary vocational education came in 1958 when Congress passed the National Defense Education Act. Title III of that Act authorized $15 million to individuals for useful employment as highly skilled technicians in occupations that required scientific knowledge in fields necessary for the national defense, as determined by individual state boards.[1] The intent was for coordination to take place because the Act called for the state plan for vocational education to be updated and the State Board for Vocational Education to administer the program. Some of us remember the struggle to get the postsecondary institutions, including the junior colleges and technical institutes, to move in this new direction. This same piece of legislation also called for the establishment of area vocational education programs.

---

[1] Public Law 85-864, 85th Congress (National Defense Education Act of 1958, Title III).

Some states moved to establish the area school concept to offer postsecondary vocational education programs. The old saying that wherever there is a vacuum something will rush in to fill it was true in this case. Later as the community college concept began to flourish, conflicts developed between community colleges and postsecondary area vocational schools. In some cases these conflicts have not been resolved to date, as each school has its own philosophy, administrative set-up, and source of funding.

In 1963, five years after the passage of the National Defense Education Act, the Panel of Consultants on Vocational Education appointed by President Kennedy recommended that: "Local-state-federal partnership must increase its support of vocational or technical education for: (1) youth in high school who are preparing to enter the labor market or to become homemakers; (2) high school youth with academic, socioeconomic, or other handicaps that prevent them from succeeding in the regular vocational education program; (3) youth and adults who have completed or left high school and are full-time students, preparing to enter the labor market; (4) youth and adults unemployed or at work who need training or retraining to achieve employment stability; and (5) services and facilities required to assure quality in all vocational and technical education programs."[2]

---

[2] *Education for a Changing World of Work*, #80021 (Washington, D.C.: U. S. Government Printing Office), p. 17.

Note that the panel of consultants was looking at vocational education as a total program. The panel report led to the passage of the Vocational Education Act of 1963 (PL 88-210). However, Congress made some assumptions that did not necessarily come true. It was believed that the total program of vocational education would be developed nationwide following the recommendations of the panel's report. However, the 1968 Advisory Council on Vocational Education appointed by President Johnson found some weaknesses in the plan that needed to be corrected.

Vocational Education - The Bridge Between Man and His Work, Highlights and Recommendations from the General Report of the Advisory Council on Vocational Education states: "to achieve the objectives of the Vocational Education Act of 1963 the system of vocational education should have the following characteristics:

1. Occupational preparation should begin in the elementary schools with a realistic picture of the world of work. Its fundamental purposes should be to familiarize the student with his world and to provide him with the intellectual tools and rational habits of thought to play a satisfying role in it.

2. In junior high school economic orientation and occupational preparation should reach a more sophisticated stage with study by all students of the economic and industrial system by which goods and services are produced and distributed. The objective should be exposure to the full range of occupational choices which will be available at a later point and full knowledge of the relative advantages and the requirements of each.

3. Occupational preparation should become more specific in the high school, though preparation should not be limited to a specific occupation. Given the uncertainties of a changing economy and the limited experiences upon which vocational choices must be made, instruction should not be overly narrow but should be built around significant families of occupations or industries which promise expanding opportunities.

   All students outside the college preparatory curriculum should acquire an entry-level job skill, but they should also be prepared for post-high school vocational and technical education. Even those in the college preparatory curriculum might profit from the techniques of "learning by doing." On the other hand, care should be taken that pursuit of a vocationally oriented curriculum in the high school does not block the upward progress of the competent student who later decides to pursue a college degree.

4. Occupational education should be based on a spiral curriculum which treats concepts at higher and higher levels of complexity as the student moves through the program. Vocational preparation should be used to make general education concrete and understandable; general education should point up the vocational implications of all education. Curriculum materials should be prepared for both general and vocational education to emphasize these relationships.

5. Some formal postsecondary occupational preparation for all should be a goal for the near future. Universal high school education is not yet achieved but is rapidly approaching reality. Postsecondary enrollments are growing, and before many years have passed, the labor force entrant without advanced skills gained through postsecondary education, apprenticeship, or on-the-job training will be at a serious disadvantage. Universal advanced training will bring increased productivity, higher standards of living, and greater adaptability to the profit of the economy as well as the individual. If postsecondary education and training is to be universal, it must be free. Fourteen years of free public education with a terminal occupational emphasis should be a current goal.

6. Beyond initial preparation for employment, many, out of choice or necessity, will want to bolster an upward occupational climb with part-time and sometimes full-time courses and programs as adults. These should be available as part of the regular public school system. They should not be limited to a few high-demand and low-cost trades, but should provide a range of occupational choice as wide as those available to students preparing for initial entry.

7. Any occupation which contributes to the good of society is a fit subject for vocational education. In the allocation of scarce resources, first attention must be paid to those occupations which offer expanding opportunities for employment. In the

elementary and junior high school, attention can be paid only to groups of occupations which employ large numbers of people, and instruction must be restricted to broad principles, common skills, and pervasive attitudes which will be useful in a broad range of employment. These restrictions are less and less valid as the student goes through high school and junior college, until, in adult education, instruction is justified in even the most restricted field if it is valuable to the individual and to society.

8. Occupational preparation need not and should not be limited to the classroom, to the school shop, or to the laboratory. Many arguments favor training on the job. Expensive equipment need not be duplicated. Familiarization with the environment and discipline of the workplace are an important part of occupational preparation, yet are difficult to simulate in a classroom. Supervisors and other employees can double as instructors. The trainee learns by earning. On the other hand, the employer and his supervisors may be more production than training oriented. The operations and equipment of a particular employer may cover only part of a needed range of skills, necessitating transfer among employers for adequate training. The ideal is to meld the advantages of institutional and on-the-job training in formal cooperative work-study programs.

9. Effective occupational preparation is impossible if the school feels that its obligation ends when the student graduates.

The school, therefore, must work with employers to build a bridge between school and work. Placing the student on a job and following up his successes and failures provides the best possible information to the school on its own strengths and weaknesses.

10. No matter how good the system of initial preparation and the opportunities for upgrading on the job, there will always be need for remedial programs. Remedial programs will differ from the preventive in that many of the students will require financial assistance while in training; the courses must be closely oriented to the labor market to assure a quick return to employment; and the trainee will be impatient of what may seem to be the "frills" of regular vocational programs.

11. At every level from the elementary school through the postsecondary, adult, and remedial programs, there will be those with special needs as defined by the 1963 Act. For both humanitarian and economic reasons, persons with special needs deserve special help.

12. Many communities are too small to muster sufficient students for a range of occupational offerings broad enough to provide realistic freedom of occupational choice. Potential students, often those with the greatest needs, live in areas too isolated for access to meaningful training. Others come from a home and neighborhood environment which makes sound preparation for life and employment difficult. An adequate system of occupational preparation

will provide residential facilities wherever their absence presents an obstacle to anyone in need of education and training.

13. The public system for occupational preparation must be supported by adequate facilities and equipment, buttressed by research and innovation, and by the preparation and upgrading of competent teachers, counselors, and administrators. To assure constant improvements, it must provide for constant evaluation and reporting of problems and accomplishments.

14. The system of occupational preparation cannot operate in a vacuum. Data must be made available on public and private training opportunities to eliminate undesirable duplication. Data on supply and demand for various occupations must be available on a broader and more accurate basis. But total training opportunities must be based, not on the number of jobs which are available, but on the number of persons needing training.[3]

The Vocational Education Amendments of 1968[4] were enacted by Congress on October 16, 1968, and were designed to overcome weaknesses found in the program. Again, the Congress reiterated the uses to which federal funds should be put and tied down percentages for certain programs. Postsecondary vocational education programs were to obtain at least 15 percent of a state allotment and handicapped programs were to obtain 10 percent. Separate authorizations were made for other programs of vocational education felt to be vital to the nation's economic and social well-being. The results of Congressional action are being realized in the nation as a whole; although there are certain "soft spots" in the program that only strong leadership can correct. Attempts are being made in Congress today to consolidate all vocational education programs under a block grant. In my estimation, it is necessary to keep the earmarked amounts for some time to round out a total program of vocational education. In some states, postsecondary vocational education would be the loser if such a block-grant federal program was enacted.

---

[3] *Vocational Education - The Bridge Between Man and His Work, Highlights and Recommendations from the General Report of the Advisory Council on Vocational Education* (Washington, D.C.: U. S. Office of Education, 1968), pp. 74-77.

[4] Public Law 90-576, 90th Congress (Vocational Education Amendments of 1968).

The Education Amendments of 1972 were omnibus pieces of legislation which updated several pieces of federal education legislation.

This was the first attempt on the part of Congress to promote community colleges: (1) Title (A) of that act dealt with Establishment of the Community Colleges; (2) Title (B) - Occupational Education Programs; and (3) Title (C) - Establishment of a Bureau of Occupational and Adult Education in the U. S. Office of Education. It is ironic, as well as divisive, that the community colleges wanted to call vocational education, occupational education. Separatism from vocational education first appeared in the name; secondly, the act called for the setting up of state postsecondary education commissions to do state-wide comprehensive planning of postsecondary programs. Even before the ink was dry from the president's signature, higher education boards were calling on governors to designate them as commissions. The power struggle was on and members of Congress were caught in the flack from all sides. Although the law was specific as to what constituted the commissions, much maneuvering was taking place. At this time, Congress has not appropriated funds for the commissions and probably will not until people in postsecondary vocational education are willing to become team members.

One of the most pressing needs of vocational education today is the necessity for better coordination between secondary and postsecondary vocational education programs. In most states it is difficult, if not impossible, for the student who has been enrolled in a vocational or technical program in high school to build on what has been learned and continue education in a vocational or technical program at the postsecondary level. In many cases, the student receives no credit for his previous training and is required to start over from "scratch," repeating instruction and wasting time and energy.

Possibly vocational educators have not properly addressed this problem because of myths about high school vocational and technical education. One myth is that few vocational-technical students go on to postsecondary education. Studies show just the opposite. Schaefer and Kaufman[5], studying Massachusetts youth, present the only data which could be found on postsecondary "going rates" for all of the major secondary school curriculums. They found that 35 percent of vocational graduates and 41 percent of college preparatory graduates enrolled in postsecondary education. In marked contrast, only 9 percent of the graduates of the general curriculum went on to further education. In the Schaefer and Kaufman study, 51 percent of those males who took work at public technical institutes or junior colleges were graduates of the vocational curriculum; for females, 59 percent were from the college preparatory curriculum. Seventy-six percent of those who were enrolled in company-sponsored training programs were vocational graduates as compared with 12 percent from each of the other two high school curriculums. Fifty-one percent of the males and 62 percent of the females who took work at private trade schools were college preparatory graduates as compared with 35 percent from vocational curriculums and 10 percent from the general curriculums.

---

[5] C. J. Schaefer and J. J. Kaufman, *Occupational Education for Massachusetts* (Boston: Massachusetts Advisory Council on Education, 1968), pp. 74, 76.

U. S. Office of Education figures indicate that nationwide, 23 percent of secondary school vocational curriculum graduates continued full time in higher education.[6] Since the Massachusetts study included part-time enrollments, the percentages may be somewhat higher and may indicate a greater discrepancy between the two sets of figures than actually exists.

Another myth is that high school dropouts come principally from the vocational education curriculum. Studies show that 67 percent of dropouts come from the "general" curriculum. A third myth is that high school students prefer to take a liberal arts program in college and do not think of postsecondary institutions as a means of getting vocational education. Actually, less than 10 percent desire liberal arts, and two-thirds of those who plan to go to college "agree very much" that "college is a place where you prepare for a job."[7]

---

[6] *Vocational Education - The Bridge Between Man and His Work, Highlights and Recommendations from the General Report of the Advisory Council on Vocational Education*, p. 31.

Having dispelled these myths, let us conclude that there is a large percentage of intelligent high school graduates who have had vocational or technical training before they reach the doorstep of a postsecondary institution.

What can be done to improve coordination between secondary and postsecondary vocational education? A few of the possibilities for constructive action are:

1. Study the high school curriculum for vocational and technical programs in your area.
2. Meet with administrators and teachers in these vocational-technical programs so that you can become more familiar with their programs and student populations, and so that they may become more familiar with the programs at the postsecondary level.

---

[7] Rupert N. Evans, *Trends in Secondary School Vocational Education Which are Likely to Affect Post Secondary Education Demands, Trends in Post Secondary Education* (Washington, D.C.: Government Printing Office, 1970), p. 85.

3. When high school courses parallel postsecondary vocational-technical subjects, provide administrative procedures so that the high school vocational-technical student can receive postsecondary credit for equivalent work.

4. If changes in the high school program seem warranted for maximum transfer credit, discuss the possibility of curriculum changes with appropriate teachers and administrators so that the student will have a smooth flow from high school to the postsecondary institution. There might also be need for changes in the postsecondary curriculum to accommodate the secondary school curriculum. It must be a "two-way street."

5. Set up a system of advanced standing exams or credit by examination so that if direct transfer of credit is not possible, the student may have an opportunity to receive credit for what he already learned and will not be required to spend hours studying the same material.

6. Finally, consider the possibility of letting high school students (particularly seniors) take some courses in postsecondary institutions while they are still in high school. This can be done through release time from school or by the student attending night classes at the postsecondary institution. In this way you have introduced the student to postsecondary training and the student has a start in a postsecondary program before graduation.

Where has the American Vocational Association been in all of these developments? Without the AVA, postsecondary vocational education would not have been a reality. It continues to be a major force. The AVA has concern for the total program and will seek to prevent its fragmentation, dilution, and destruction. I must say that the postsecondary vocational educators have not supported AVA to any great extent; however, this in no way diminished our commitment to the total program. We solicit your support, your ideas, and your influence.

ORGANIZATIONAL AMBIVALENCE: PROBLEMS IN THE COORDINATION OF OCCUPATIONAL EDUCATION IN MULTI-UNIT URBAN COMMUNITY COLLEGE DISTRICTS

Arthur R. Oswald
Consultant

The multi-unit district (MUD) is a relatively new organizational form for community colleges; however, a substantial number of public MUDs have now been established. A 1970 national study analyzing changing organizational structure in public two-year institutions indicates movement in the direction of cluster arrangements.[1] Of the 542 reporting colleges in the United States, 150 institutions (36 percent) were multi-unit districts. The largest of this new form--the urban or metropolitan multi-unit district--is a phenomenon of the 1960s, when nearly 30 MUDs were either created or gradually expanded from a single college to meet the pressing needs of big city clientele.

The term "urban MUD" covers a diversity of arrangements, but it refers mainly to the following criteria: two or more separate colleges or instructional units; a major city location with at least one college located in the downtown section and another in an outlying suburb; broad-based local tax support; and a single governing board and central office. Wide variations now exist in the number, size, and type of urban district colleges. The Chicago City Colleges system, the largest district in the nation, encompassing hundreds of square miles, has eight individual campuses plus a TV college which serves all Chicago. The Loop Campus, the system's downtown institution, enrolls more than 10,000 students. Miami-Dade Junior College District is a three-college system. North Campus, located in the industrialized northeast sector of metropolitan Miami, is the district's acknowledged technical-industrial training center and presently enrolls more than 18,000 students. Nearly thirty miles to the south, South Campus is located in residential and affluent Coral Gables. Considered the "Harvard" of the system by many of its students, the South Campus curriculum offers only select semiprofessional and technical training.

---

[1] Dale Tillery, *Variation and Change in Community College Organization: A Preliminary Report* (Berkeley: Center for Research and Development in Higher Education, University of California, December 1970.)

The Peralta Community College District in Oakland, California, may be unique. Four district colleges, only freeway minutes apart, are located in highly dissimilar metropolitan settings, including both a black ghetto and several surrounding white, affluent suburbs. The system is completed by the inclusion of a fifth college located 200 miles away in a non-contiguous community in rural and mountainous Plumas County. There, diminutive Feather River College enrolls fewer than 500 students and has little in common with other Peralta institutions. However, it has voluntarily committed itself to the fiscal fortunes of the distant metropolitan district through the instrumentation of state legislation which provides for such special arrangements.

Even these brief sketches make it obvious that generalizations about a MUD organization can be incomplete and premature. Each district is a manifestation of a particular metropolitan setting--its history, people, and politics. Moreover, few studies concerning multi-unit organizations have reached the research on higher education. It is true that more studies than before have appeared in recent years, and these have tended to look more carefully upon the developmental processes and the inner dynamics of such systems.[2] But we need to know much more than we now know. However, some useful observations can be made and a tentative overview drawn from data which are presently available. It is to the coordination problems of the large urban MUDs that this paper addresses its remaining comments.

---

[2] Frederick C. Kintzer, Arthur M. Jensen, and John S. Hansen, *The Multi-Institution Junior College District* (Washington, D.C.: American Association of Junior Colleges, 1969); C. Patrick Carter, "Interorganizational Arrangements for Technical-Vocational Education in Multi-Unit Community College Districts" (Unpublished doctoral dissertation, University of California, 1971); Ernest G. Palola and Arthur R. Oswald, *Urban Multi-Unit Community Colleges* (Berkeley: Center for Research and Development in Higher Education, University of California, 1972); and, John A. Jenkins and Joseph G. Rossmeier, *Operational Control Patterns and Effectiveness in Urban Multiunit Community Colleges* (Ann Arbor: Center for the Study of Higher Education, University of Michigan, 1973).

The Organizational Setting

Expanded metropolitan districts have developed primarily as a response to population and geographic spread. The early observations of Erikson[3] still prevail as important reasons for the growth of urban multi-unit colleges: the rural-to-urban population shift; an internal selective urban population migration; the post-World War II increase in the annual birth rate; the rapid and varied changes in occupational technology; and the increased understanding of the role of the community college by administrators and trustees of four-year colleges and universities. Metropolitan districts were also formed to establish a wider tax base under one governing board, thereby offering postsecondary education to communities unable or often not disposed to provide such educational access. Moreover, the development of the metropolitan district tended to militate against the drawing of arbitrary sectional boundaries by municipal governments which have often created barriers to the efficient integration of levels of urban education.

With multi-unit growth, however, the community college district has exhibited a significant departure from similar purposive expansion by other higher education networks. These include multi-campus universities, nonpublic cluster college systems, public and private consortia, and the broad spectrum of state-wide higher education coordination. In these latter arrangements, network segmentation has been fashioned for the expressed purpose of providing a necessary internal institutional specialization, program diversity, and system integration. Moreover, these institutional forms customarily have been planned in advance of their implementation, and new organizational structures have been suggested for their governance and management.

---

[3] C. G. Erikson, "Multi-campus Operation in the Big City," *Junior College Journal* 35 (1964): 17-21.

In these terms, the formation of urban community college MUDs has been less explicit. For the most part, the fission of one original city college into several metropolitan counterparts, or the simultaneous facilitation of several new urban community colleges, has been followed by a traditional institutional model of the comprehensive curriculum which emphasizes transfer programs and, to a somewhat lesser degree, associate degree technician training. This development of look-alike institutions has been coupled with conventional forms of institutional operation and management. This may not be too surprising. The origins of the community college are to be found primarily in the comprehensive public secondary school in America,[4] whose system of operation featured: a hierarchically arranged authority structure; communication flow from the top down; faculty work loads routinely distributed by formula according to the size of the institution and the number of its educational departments; frugality and rationality in administrative decision making in terms of the perceived public interest; and control by citizens representative of the community power structure.

---

[4] *The Open-Door Colleges* (New York: McGraw-Hill, 1970).

Medsker and Tillery[5] observe that this historical affiliation has tended, until very recently, to result in a more conservative approach to institutional governance and management than is found in the other segments of higher education of which the community college is now a full partner. Yet it seems a reasonable assumption that several colleges cannot operate as though they are really only one institution, or that each is like the other, in the broad sweep of changing urban settings. These authors go on to suggest that the conventional form of operation and administration is being gradually modified in an increasing number of community colleges. A major theme under consideration in this commentary is that the process of change in the occupational education posture of urban community college MUDs may not be taking place quickly enough to keep pace with the realities of metropolitan requirements.

The Instructional Setting

The idea of many different and specialized training programs for a large and diverse clientele offered predominantly at only certain community colleges within a metropolitan MUD takes its most significant form today in the development of vocational-technical instructional areas.[6]

---

[5] Leland L. Medsker and Dale Tillery, *Breaking the Access Barriers: A Profile of Two-Year Colleges* (New York: McGraw-Hill, 1971).

At least two factors account for such a change in the look-alike comprehensive curricula of urban MUD colleges. First, the inner-city campus primarily services the needs of ghetto clientele. One of the central functions which identifies the unique missions and roles of the inner-city community college, and at the same time distinguishes that responsibility from those of suburban and/or rural campuses in the same district, is the provision for a variety of types and levels of courses leading to occupational specialization. Central city--the metropolitan hub of commerce, industry, business, government, and service-related activities--is heavily concentrated with skilled, semiskilled and semiprofessional occupations and trades. Many of the skills required to perform these tasks effectively must be learned through postsecondary training, and in most cases for ghetto residents the only available institution for such preparation is the inner-city community college.

Contrary to current impression, black minorities, in particular, migrate to inner cities today less from the rural South than from other inner cities. Moving essentially because of occupational obsolescence, migrants arrive in new urban centers hoping for jobs. In this sense, rapid technological change has necessitated the retraining and upgrading of people in many highly skilled and technical areas.

---

[6] Several seminal ideas in this section which concern the differentiation and selective displacement of occupational programs in big city MUD colleges have been graciously shared with the author by Dr. John Grede, Vice Chancellor for Career and Manpower Programs, The City Colleges of Chicago.

To meet the needs of an increasingly mobile population, as well as those of a rapidly changing post-industrial society, the training and retraining functions of the inner-city community college have continued to expand and to be updated. In recent years, the inner-city campus has served also as a testing ground for many new programs, among them a number in the allied health field and in the expanding area of social technology, which were designed to provide community program leaders, child day-care personnel, outreach and social service assistants, aides for elementary and secondary education, and public service technicians. Funded initially through federal economic opportunity legislation, many of these training efforts have been locally absorbed and have become an important feature of community development being implemented by the inner-city community college.

The second factor which has modified the traditional carbon copy comprehensive educational pattern at each district college has been the unrelenting growth of vocational-technical training designed to prepare students for immediate employment at varying occupational levels rather than for prebaccalaureate thresholds. A major thrust in this area began in the early 1960s. Enhanced by strong federal legislative and fiscal support, the momentum continues a decade later, with interest and support maintained in varied magnitude by both federal and state governments. District suburban campuses, in particular, have emphasized certain occupational education offerings in the wake of the new career movement of the 70s. These are usually described as a higher level core of vocational-technical training, and purport to meet the more sophisticated job entry requirements of middle manpower. Curricular designs and guidelines prepared by the

Occupational Education Project of the American Association of Community and Junior Colleges have fostered this level of career preparation in recent years.

Such program offerings are normally adjuncts of the associate degree requirements of suburban institutions. In this relationship, general education course requirements, considered by many vocational-technical deans as learning keystones to the occupational training programs, have been met by a traditionally prescribed core of standard liberal arts courses. Suburban MUD colleges tend to have significantly fewer of the lower level or non-collegiate skills training programs, which are left to other district institutions; e.g., downtown colleges, skills centers, and county occupational centers where diplomas, certificates, and other formalized recognitions of achievement are awarded for program completion.

It has been noted that the suburban socio-economic life style and community self-image are different from the community environment of other district colleges. A natural affinity between suburbia and sophisticated college programs does exist. Because there are more suburban colleges in the aggregate of metropolitan MUD institutions, prestigious middle-level technical training has tended to be widely proliferated, and is often duplicated within a single district. A debilitating competition between institutions has often taxed the management capabilities of administrators and faculties alike, not to speak of the drain on district resources. Presently, occupational training in different suburban colleges within a single district is trending more in the direction of the needs of new local industries; e.g., computer programming, oceanographic technologies, and numerical control, causing an increasing differentiation of the instructional functions of a district.

There is nothing particularly new in these observations, and administrators and faculty groups will readily admit to the influence of both factors on instructional arrangements at a college and within the district. What is of interest here is the process by which such instructional modifications have taken place and the subsequent problematic ramifications for the coordination and integration of vocational-technical instruction in the network of institutions.

The Diversification of Function

Technical-vocational instruction in urban MUD colleges has experienced a phenomenon that might be appropriately referred to as "institutional drift"--a concept borrowed from social ecology and connoting the natural evolution of adaptive tendencies in varied environments of organic forms which have separated from a common parent. This "drift" has been a rather gradual and natural development in the sense that little of any district program planning or advanced instructional preparedness was manifested for the different functions which might be required of colleges placed in select sectors of a large metropolitan area. Today, most urban MUDs have experienced occupational program differentiation among their colleges. Yet catalogs and brochures still announce the educational comprehensiveness of each district institution, administrators behave officially as though all colleges are essentially alike, and trustees determine organizational policy as if network institutions will function congruently.

A fundamental assumption and its validation underlie this view of institutional sameness. The assumption holds that there is little clientele difference in the metropolitan service area. Hence, Grede tells us:

> The new campuses were distributed geographically over the city and thus brought closer to the students. The rationale for the process was the proximity principle, which held that there was a large unserviced market for community college education and that if campuses were put out in the neighborhoods, more people would come to college. It was true. New campuses opened without generally affecting enrollment in older campuses and the net impact was to increase enrollment. . . .
>
> What was equally significant along with the increase in enrollment was that the new campuses were modeled on the programs of the older campuses and initially staffed by faculty of the older campus working overtime. The effect was to replicate the essentially baccalaureate-oriented two-year educational programs and provide the new campuses, new students, and new neighborhoods with the same educational fare. . . . The demand for education was so great that new programs meeting specific needs were unnecessary to get increased college attendance. Thus, the community to which the new campus responded was the

same city-wide community of the older campus.[7]

The validation is grounded in demographic research data gathered over the past two decades. Big city districts were established in an era when metropolitanization in America experienced its greatest growth.[8] During this period, increased geographic mobility and notable economic affluence tended to temporarily blur group and residential differences in an exploding population. In the 1950s and much of the 60s, urban growth--expressed in increased use of metropolitan land-areas and the residential concentration of nearly one-half of the nation's population--often gave the appearance of a homogenized public life. Institutional development and service seemed to take on a standardized approach to clientele, suggesting a mass sameness in the behavior and characteristics of urban residents.

Grede points out that "distinct communities were not obvious, or if distinctiveness existed it was not obvious in educational planning."[9] In discussing the relationship of man to city and of public institution to man during this period, Hodgkinson[10] suggests that as a consequence of the overlapping jurisdictions of many urban forces, large numbers of residents belonged to no particular urban community. And urban sociologists have tended to minimize the influence of local communities and neighborhoods with distinctive life styles, value orientations, and service needs on metropolitan growth in these years.

---

[7] John F. Grede, "Collective Comprehensiveness: A Proposal for a Big City Community College," *Journal of Higher Education* 41 (1970): 183-184.

[8] A. Schuchter, *White Power/Black Freedom* (Boston: Beacon Press, 1969).

[9] Grede, "Collective Comprehensiveness: A Proposal for a Big City Community College," pp. 183-184.

Since at least 1968, a review of American urban life has been made with abrasive scrutiny. It now seems abundantly clear that terms such as sameness and homogeneous no longer accurately describe metropolitan community life, if ever they did, and that the big city is surely a complex milieu of many peoples, places, economic needs, normative life styles, and circumscribed world views.

It is suggested here that the placement of several colleges within an expanded urban MUD has been essentially random if well intended, and has proceeded primarily as a means for providing transportation convenience and residential propinquity for students, rather than as a base for serious effort to identify and service different kinds of communities within the metropolitan district.

As instructional programming unfolded in each of the new colleges, it was soon recognized that occupational training could not, and probably should not, follow the identical pattern of distribution among all campuses as did the conventional liberal arts offerings and senior college transfer programs. Four factors seem to account for this awareness. First, occupational instruction hardware is expensive, and a specialist staff is not easy to convene in the face of commercial-industrial competition. Duplication of program in several institutions has proved an infeasible financial liability in a period of economic retrenchment and has often drawn community criticism in many districts. Second, recent and rapid differentiation of the occupational education programs at the previously mentioned inner-city colleges was perhaps the first shift in institutional identification with a very different service area within an urban district.

---

[10] Harold L. Hodgkinson, *Education, Interaction, and Social Change* (Englewood Cliffs, N.J.: Prentice-Hall, 1967).

Third, for reasons which are not as yet clear, certain colleges developed a concentration of specific occupational education programs. Evidence points to such programs meeting the requirements of a community's economic base. The rural institutions do have the programs in forestry technology, animal husbandry, and agribusiness. Many suburban campuses specialize in sophisticated technical and semiprofessional training; e.g., engineering and electrochemical technologies, as allied industries move out of the central city to merge interests with outlying metropolitan residential localities. But the program placements are not always so neat, and may, in fact, have much to do with the complexities of the district office's instructional placement decisions in the face of strong campus autonomy. This "natural grouping" of vocational-technical offerings among different district institutions is still to be better understood.

Finally, there has been an increasing tendency to locate certain occupational programs in association with similar instructional efforts of other institutions and agencies. The concentration of allied health training in one community college juxtaposed with the professional service activities of public health facilities, university medical schools, and proprietary health training institutions to form a large urban medical training center is a case in point. This feature of interinstitutional association is as much a function of new concepts in metropolitan planning and public resources accountability as it is an independent MUD decision about program placement, and points up the matter of new external influences on the ostensibly autonomous community college system.

The urban MUD reaction to the casual and largely unplanned diversification of occupational education offerings among its colleges has been after-the-fact, in most cases. In some urban districts, the casual dispersion continues and, with the possible exception of recent provisions for district-wide admissions and student cross-registration, is met with an easy concern by administration and staff for its future implications. Unfortunately, the research and data available about this new organizational form for the community college are inadequate for a rigorous analysis of the comparative motivations toward structural change by different MUDs. Perhaps multi-unit districts with few colleges and a reasonably accurate control of student enrollments can remain segmentally comprehensive or indeterminately casual about a local program emphasis.

For some large urban community college MUDs, however, concerned realization of increased instructional specialization has resulted in a planned reorganization of the district instructional pattern. A decade after its inception, the Miami-Dade Junior College District developed long-range institutional planning which established guidelines for the approval of and the responsibility for new programs, as well as criteria for the institutional placement of specific offerings.[11] For several years, the St. Louis Junior College District has fostered the development of four major occupational education areas; i.e., engineering technology, health services, business technology, and public service, each with a specific emphasis at different district colleges. The recent district master plan specifically avoids duplication of program and develops steps for effective internal articulation among colleges.[12]

The Peralta Community College District has concentrated the bulk of its vocational instructional programs, including the training and retraining of unemployed persons referred by the State of California Human Resources Development Department, at a downtown Skills Center. This facility maintains equal organizational status and rank with district colleges and is administered by a system director.

Perhaps the most ambitious attempt at total reorganization of a district-wide curriculum has been recently considered by the City Colleges of Chicago.[13] The plan is to firmly structure the system along occupational or career lines in terms of five major divisions: engineering and industrial; business, secretarial, and data processing; health services; public and human services; and general education. Instruction at any district college would be exclusively a function of one of the occupational divisions. Traditional liberal arts courses would be available in each institution as a support base for occupational programs. It is significant that the nation's largest urban MUD would attempt the complete overhaul of the organization of the system curricula; however, to consider total reorganization in terms of occupational education--from central administration to student entry--is assuredly futuristic.

---

[11] The Miami-Date Junior College District, *Long Range Planning at Miami-Date Junior College* (Miami: The District Office, January 6, 1970).

[12] *Master Plan for the Development of the Educational Program and for Supporting Facilities and Services* (St. Louis: The District Office, May 1, 1970).

[13] John F. Grede, "Career Education for Community Colleges," mimeographed, (City Colleges of Chicago, April 11, 1972).

Even with the amount of organizational change now under consideration or being implemented by urban MUDs, the management and operations structure of these districts still is largely maintained along the aforementioned traditional lines. To be sure, some structural expedience wrought by urban change has brought about the establishment of several levels of intra-district councils for review and advisement, the employment of central office specialist personnel, a renewed attention to lagging community manpower surveys, the development of emergency measures to care for tenuous occupational programs and their apprehensively committed clientele, and a growing recognition of the need for an agreed-upon division of authority over those instructional matters to be settled primarily by the district office and those to be settled primarily at the level of the local college.

What seems to be called for are carefully designed and interrelated district organizational structures and functions. Keys to such eventual development are the provisions for meaningful operational goals as well as the policies and procedural arrangements necessary to their implementation. Critical courses of action include:

decisions about instructional program location within the district; the development of criteria to use in making choices about new programs to be undertaken; current programs to be modified or furloughed; the allocation of resources according to some priorities format; the qualifications of students for college and/or program admissions; and the performance standards for awarding degrees or for minimum qualifications for job entry. Further discussion of these measures follows.

Organizational ambivalence might collectively describe urban MUDs today as they range in inter-institutional flexibility from an expedient modification of traditional operations patterns on the one hand, to planned comprehensive change of the total organizational structure on the other. In the former, educational function usually has allowed the organizational structure to predominate. In the latter situation, organizational structure follows after the delineation of specified educational function. The varied attempts to meet the organizational requirements of expanding community college MUDs have precipitated problems in network instructional coordination.

The Problems of Instructional Coordination

Even if each community college curriculum was the homogenized comprehensive unit which a district rhetoric impresses upon its constituency, the problem of the system's instructional coordination would continue to be vexing, as it most probably is for multi-campus networks facing intercampus competition, program replication, strained resources, and shifting clientele. But the increased diversification of occupational education programs among select institutions of a metropolitan district, whether random or purposive, makes the need for greater system-wide coordination and cooperation at many levels imperative. The bases for coordination are many, but the following seem particularly significant in this matter: the uses of long-range planning; policy formulation and implementation characterized by measures for system integration; provision of educational services to meet district-wide needs; and rapproachement between institutional autonomy and district objectives.

Related problem areas reflect such bases, and require further study and subsequent resolution if big city MUDs are to reach the degree of effectiveness which their statements of urban commitment seem to promise.

1. Long-range Developmental Planning. Community college long-range planning, except in instances of plant and facilities development, has not been a notable enterprise. Urban MUD master planning for instructional purposes, particularly in the anticipatory and speculative phases, is lacking for occupational education. But for exceptional cases, instructional program planning has been piecemeal, inconsistent, short-term, expedient, and not particularly noted for the full participation of concerned faculty in either the decisions about program logistics or the determination of educational policy.

Bender[14] has pointed up the implications of master planning as it relates to occupational education, and underscores the fact that such planning is necessary for any kind of system coordination. Coordination allows for an intelligent centralized design, an educationally effective network development, and purposeful instructional directions. The handmaiden of coordination is clientele feedback in the form of recurring assessment of local community needs; e.g., continuing input of circumstances, developments, and requirements in manpower fields to be used in subsequent planning and review stages. Review and restatement of the long-range plan must follow, based on methodical and uniform evaluation of the instructional program. Medsker[15] has recently commented on the necessity for program evaluation in occupational education.

---

[14] Louis W. Bender, "Post-Secondary Occupational Education and the Pennsylvania Master Plan for Higher Education," *Post-Secondary Occupational Education: An Overview and Strategies*, ed. Angelo C. Gillie (University Park: The Center for the Study of Higher Education, The Pennsylvania State University, 1970), pp. 40-47.

Grede gives us a highly compact view of coordination as the guiding function of a system of diversified district institutions where each emphasizes a major occupational training specialty:

> If one starts with the relationship of the student to his educational program as the basis for the institutions, then logically the organization of the educational structure . . . must support and expedite that relationship. One step

---

[15] Leland L. Medsker, "Strategies for Evaluation of Post-Secondary Occupational Programs," *The Second Annual Pennsylvania Conference on Post-Secondary Occupational Education*, ed. Angelo C. Gillie (University Park: The Center for the Study of Higher Education, The Pennsylvania State University, 1971), pp. 7-28.

> further takes us to the position that budgeting and expending of resources, determination of comparative costs, identification of priorities, collection of data through institutional research, and evaluation of success must be related to the program base which the institution is developing. With programs clearly identified, students closely related to programs, faculty and supportive student services allocated by program, the next step is to identify program costs, relate those costs to enrollment and output, and determine and establish a comparative cost basis per unit of enrollment or output. Then, with availability of adequate funds and qualified staff determined, with manpower needs for graduates carefully assessed and placement probabilities identified, a sensible basis for program initiation, continuance, or expansion is at hand. This is the essence of a program-planning-budgeting system and a management information system, both of which are integral parts of an institution conceptualized and operated on a program base.[16]

System coordination through developmental planning might not necessarily require the absolute utilization of MIS and/or PPBS practices, although trends now move strongly in these directions. A former financial vice president of the large St. Louis community college MUD calls for their application to bring current operations in line with available resources as well as to indicate to the paying public that educators can be good managers.[17] Whether or not one wholly agrees with the specifics of Calais' directive, it seems clear that what is required is some systematic way of ordering educational priorities, with choices of alternatives possible as data are made available on a recurrent basis about the appropriateness of program placement and direction.

---

[16] Grede, "Career Education," pp. 12-13.

Perhaps the most important conclusion rendered by the several nationwide planning studies of higher education systems undertaken to date is that both institutional autonomy and the level of instructional performance of the institution have improved as a result of network planning and coordination.

2. Alternate or Complementary Institutional Goals. All district office and institutional personnel associated with urban MUDs adhere to the basic philosophy and major purposes of community college education. These are too well known to belabor. However, shared broad purpose may be implemented differentially by colleges within the MUD, through the pursuit of more specific ends which are achieved through cooperative policy formulation and program decision making. If the metropolitan area is a complex of varied and different service sectors, then the localized college serves specific training needs; e.g., the inner-city ghetto or the suburban pocket of plenty.

---

[17] Mary Jane Calais, "Participatory Planning and Management," *Meeting the Financial Crisis*, ed. John Lombardi (San Francisco: Jossey-Bass, 1973), pp. 17-25.

Theoretically, we know that "a continuing situation of necessary interaction between an organization and its environment introduces an element of environmental control into the organization . . . efforts must produce something useful or acceptable to at least a part of the organizational environment to win continued support."[18] The definition of occupational education programming and the explication of the vocational-technical faculty and staff roles at a localized college are significant means of identifying the mission and purpose of the institution, both to its service community and to the other district institutions. Such a definition; i.e., the institution's goals, is a statement of what the college is all about as well as a reflection of the college value commitment.

Problems persist in urban MUDs where coordination, or the lack of it, cannot integrate the various alternative missions and roles of district institutions for the district-wide good. The perspective here is closely related to institutional integrity and campus autonomy, because it is the manner in which the centralized procedures of the district office conceive and implement occupational education that determine the instructional responsibility of a given institution.

---

[18] James D. Thompson and William J. McEwen, "Organizational Goals and Environment," *Complex Organizations*, ed. Amitai Etzioni (New York: Holt, Rinehart and Winston, 1964), pp. 177-186.

3. The Role of the District Office. The central problem of urban MUDs is the power relationship between the district office and the local campus. Some MUDs still place decision making at the lowest level of the district, or practice selective decentralization so that curriculum development might be left principally to the institutions. But there has been a steady movement in the direction of more centralized control by the district office, accompanied by the increase in office personnel constituted largely of staff specialists. Such augmentation has been explained in terms of the sheer number of tasks the central office must perform in order to render greater district accountability and to produce a more careful check on the district's educational effectiveness. One result has been the appearance of several levels of administrative review; e.g., budget requests and new instructional programs, which often entail checking and cross-checking before a final decision for implementation can be submitted.

The effects of centralized accretion on occupational education are many and cannot be treated exhaustively here. Hopefully, three problem instances will suffice. First, the need for additional occupational education at the community college level is acknowledged by practioners. The expense of such training is also known--costly equipment and methods, unique facilitation, highly trained and experienced staffs, and a small student-faculty ratio. Without proper and careful coordination of district and institution viewpoints, a collision course may well be set between efficiency (fiscal rationality) and effectiveness (educational decisiveness). Should this happen, the probable results are at least twofold: the imposition of increased instructional constraints to effect standardization among colleges; and, a blurred recognition of and diluted support for those colleges who seek solutions to their service community's occupational training requirements.

Second, coordination by the district office is even more significant in the areas of resource allocation and planning. Community manpower needs can be immediate and dramatic. Occupational training preparation must be flexible in response. Even under normal circumstances, it may take a year to eighteen months to complete a district-wide budget. When clearances have to be obtained at several successive levels of authority, the process is complicated and delayed. Few budgets work when handed down in detail from a surrogate authority. To be successful in operation, joint and cooperative planning should proceed up from the institutional operations level and down from those who understand the limits of the resources.

Finally, the traditional argument for local financial support focuses heavily on the issue of local control; e.g., the servicing of local occupational training needs. It has been indicated that a great city is not a homogenized place with standardized needs, but is, like Chicago and St. Louis, a complex of political-social subdivisions with different skill-preparation requirements. Further, there is sufficient evidence to indicate that many local community groups; e.g., labor, business, and industry--within the greater metropolitan setting--function in important ways to foster their particular interests. District-wide coordination problems arise when people who are to be benefitted and taxed have little influential voice in the local college operation.

Thus, what is coordinated, how coordination takes place, and who may be involved in the coordination process are factors which often lack agreement in a shifting distribution of authority between central office staff and institutional personnel and could have increasing import for the development of effective vocational-technical education in urban MUDs. It is interesting to note at this point that in the national study of organizational change in instructional programming cited earlier,[19] Tillery found that both the level of concern for and the amount of involvement in the planning for new instructional program structures by vocational-technical staff members were less than for all other faculty. And in general, these dual concerns were reported as being little more than of mild interest for occupational staff.

4. The Governing Board. There is sparse research available about the highest governing body in urban community college MUDs. We know little if anything about the organizational behavior of trustees in this interinstitutional form. However, data indirectly informed by other urban MUD research, together with information about trustee attitudes drawn from multi-campus research at other levels of higher education, help us form two useful observations in the coordination context. First, it has been pointed out that the most serious need for governing boards of large multi-campus systems is to become concerned with matters of system-wide coordination--fostering and carefully assessing the interplay of institutional diversity and program specialization within the framework of system objectives. Specifically, trustees have the power; i.e., the ultimate policy-making responsibility and authority, to specify the conditions under which allocation of funds may be used, and they can insist

---

[19] Tillery, *Variation and Change in Community College Organization.*

that campuses diversify their programs rather than duplicate one another in the interest of both system-wide service and local community needs.

Presently, however, community college MUD boards of trustees are further removed than before from the local campus environment and the realities of its daily life and operational practicalities. The board is yet another level of bureaucracy, albeit the highest and with superior sanctions. Moreover, the complex multi-campus network it governs creates an even larger external environment to which trustees must effectively react if they are to neutralize political "flack," compromise conflicting community vested interests, and generate an outstanding public image. This is no small task, but one which has often screened off relationships with administration, faculty, and students who require even more regular contact with the board about district internal developments. If the structure of occupational education is changing significantly within the metropolitan service area, a policy problem is generated when the ultimate governance authority lags in the regulation of that instruction's pace, strength, and direction within the educational system.

Finally, some boards understandably have been accustomed to the conventional community service tone of a "flagship" campus, the original city institution. This is particularly so if the city college has been in solo operation for many years. When fission takes place and several new campuses begin operation, there is the tendency by incumbent trustees to assume that the instructional distribution pattern will remain comparable--a curriculum featuring the traditional baccalaureate-oriented liberal arts courses, senior college transfer programs, and to a lesser degree, semiprofessional offerings. These assumptions are valid when little developmental planning takes place. If the traditional district policies are not much changed, needed substantive occupational education programs at all training levels face an uphill trek toward recognition and support.

5. District Internal Communication and Reciprocity. In the single-college district, the extent to which the occupational education function is served is determined primarily by an in-house commitment and the familial allocation of resources. Problems of coordination exist, but these are handled on departmental bases which are face-to-face, immediate, and highly localized.

Urban MUDs add two key dimensions to coordination. First, institutional commitment must extend beyond concern for only its offerings to include the provision for *district-wide* programming through cooperation with other network institutions. A desirable diversity of offerings means, as complementary to its own special vocational-technical emphasis, that there would be on a district-wide basis a range of both short duration certificate and two-year associate degree programs as determined by overall community needs and geared to the interests and abilities of the heterogeneous urban student population. This is both a planning and maintenance problem which requires that local college and district personnel remain actively aware of the needs of all segments of the metropolitan community and be committed as well to the broad objectives of providing a diversified occupational training program on a network basis.

Finally, these efforts mandate that college and district organize such arrangements about a complex of rational decisions, agreements, and understandings related at the same time to district-wide demands and local college integrity. These integrative arrangements include at least five significant components: (1) clear definitions of institutional and district goals and purposes; (2) concisely stated policies, procedures, and standards which regulate the operation and maintenance of the district colleges, as well as the activities of all personnel associated with them; (3) support and cooperation by leaders of key administration, faculty, student, and community groups for college and district objectives, as well as for the consensually established means for obtaining these ends; (4) an assurance of equality for all district institutions and their instructional representatives in the decision-making and policy-determining apparatus of the district, including parity of challenge and negotiation over local issues; and (5) personnel and financial resources for the support of the district-wide instructional program to be allocated and distributed in ways which rationalize the network purpose with the assigned responsibilities of local colleges. This last component is crucial for occupational education. Vocational-technical training seems always to be "just emerging" as a major function of the community college, even after nearly three decades of serving well a major share of the clientele attending this postsecondary institution on a nation-wide scale. "Emergent" may signify nothing more than the historic lack of adequate resources, astute programming, and proper community placement on the one hand, and the more cleverly competing competencies of academic departments on the other.

Perhaps this listing of organizational characteristics is the optimum, but without some kind of similar structure and method for educational delivery on a mass scale, large urban community college MUDs face immense problems in the coordination and articulation of occupational education which no amount of typical "can do" rhetoric will supplant.

Occupational Education in Prospect

Although several big city community colleges have registered notable accomplishments, it is conceivable that the urban MUD may not be the most effective organizational arrangement for serving the occupational training needs of a diverse metropolitan clientele--at least in its present ambivalent forms. This commentary has intended to be neither an argument supporting its merits nor an apology for its limitations. Many cities are served well by a single, large, comprehensive institution. Others, like San Francisco, have arranged to meet the growing needs of urban residents through an active involvement in city-wide consortia which include senior institutions and public agencies. Still other cities feature confederations of area vocational-technical schools, community colleges, proprietary institutions, industrial training centers, and the like. Additional city-wide arrangements for a comprehensive distribution of educational services are the subject of a recent Carnegie Commission report.[20]

The issue examined in this paper is that the rapid expansion in the last decade of the public, urban, two-year multi-college system has taken place in often random fashion, as it has attempted to provide the vast area to be served with a sufficient number of low cost, residentially localized, open-access institutions, with each featuring comprehensive curricula for a new and diverse clientele. Few disagree that this coverage has been achieved well enough where attempted. As an unexpected outcome, however, occupational education programs have tended to become specialized at different institutions within a district for a variety of reasons. Belated arrangements in some districts have acknowledged this phenomenon by providing formal control factors for continued specialized program growth, district support, and local community advisory input. Such measures have usually been a compartmentalization of traditional educational policies.

---

[20] Carnegie Commission on Higher Education, *The Campus and the City* (New York: McGraw-Hill, December 1972).

Today, an awakening to the checkered pattern of a new urban social fabric and a sharper reaction to the increased national commitment to occupational preparedness strongly suggest an even greater need for planned and measured arrangements for the systematic coordination and integration of occupational education in all urban MUDs.

THE ROLE OF THE COMMUNITY COLLEGE PRESIDENT IN KEEPING VOCATIONAL PROGRAMS VIABLE

Ernest Notar
President
Niagara Community College
Sanborn, New York

In parparation for this paper, I had the opportunity to reflect on what the job or the role of the community college president is in keeping occupational education viable. As the chief administrative officer of the community college, I have been asked many times, "What do you really do?" And many times I have wondered about that myself. It has also given me the chance to review some 25 years of experience in postsecondary two-year college education, which ran the gamut from the original technical institute concept in New York State in 1947 to the present comprehensive community college concept. I would like to say, but I can't, that my experience followed a clear, definite, clean-cut set of rules and procedures, with everything laid out in a nice pattern which, if faithfully followed, would guarantee eventual success. Not so; there were no such guidelines or traditions to follow. At times we had to use the shotgun approach to the problems of facilities, faculty, finances, and instructional programs. And at other times, a rifle shot, so as to give proper attention to the crises of the moment.

Occupational Education

Occupational education has been a national, state, and local issue and concern throughout this century. Meetings, seminars, conferences, conventions, and position papers have all addressed themselves to this topic; in recent years, forces in our society have focused public attention on the need for enlarged and improved systems of occupational education.

The Regents of the State of New York, in a recent position paper, defined occupational education "as that part of the education process which prepares people for employment in occupations requiring less than a baccalaureate degree. However, occupational education in its broadest sense should be seen as an aspect of the total educational process. While it can be distinguished from other components of the educational process by its emphasis on developing job skills, occupational education functions as a part of the total process in developing the many characteristics for personal, social, and occupational success. Besides developing specific job skills, occupational education provides orientation to work and guidance in the selection of educational and occupational objectives and is, therefore, a program for all students, not only for those who desire training in specific job skills. For occupational education to be a continuum, completely free of built-in limitations on student aspirations, every qualified student must be guaranteed the opportunity to enroll in a postsecondary educational program consistent with his talents and interests. Such a guarantee will require that every *community college* recognize and fulfill its responsibility to prepare its students for occupations requiring postsecondary occupational education and preparing students, including occupational students, for continued study in four-year institutions."[1] The State University of

---

[1] "State Education Department Position Paper" (University of the State of New York, 1971).

New York, through its system of community colleges and agriculture and technical colleges, and the individual community colleges, has taken a strong position toward this goal.

Entry of Occupational Education into the Community College

Although community colleges have been in existence for many years, the predominant pattern for public education, until recent years, has been elementary, junior high, high schools, and colleges and universities. The vocational education structure was concentrated almost entirely at the secondary school level, while occupational education in colleges and universities was confined almost exclusively to the professions. Increasing educational demands in a number of sub-professional occupations led to an obvious need for vocational education beyond high school. For many years this need was either ignored or filled by private schools. This private school involvement has been growing in recent years; however, vocational education of all types in public postsecondary schools has been growing even more rapidly. A high proportion of these public institutions have been sold to the taxpayers on the basis that they will provide a significant amount of vocational-technical instruction. Despite the fact that the community colleges committed themselves to a comprehensive program of both vocational-technical and transfer curriculum, the first program usually offered is designed for college transfer students. In part, this is due to student demand, since more students or their parents desire traditional collegiate instruction. An equally important factor is the effect of limited finances and limited space. College transfer programs can frequently be offered at considerably less cost per student than vocational programs. The amount of specialized space required is normally much lower since new community colleges are usually started in temporary facilities before revenues of any substantial amount are available. In my experience in the establishment of two community colleges, we have used as temporary facilities such abandoned buildings as an automobile factory, a cereal manufacturing facility, a chemical plant, an elementary school, a secondary school, a church building, motels, and homes. It is quite common for the school to begin with a college transfer program. Naturally, a staff is selected which is competent to offer such programs. After several years of operation, new buildings are secured and the financial condition of the college becomes clarified. The college curriculum begins to make its impact at about this point in the development of the school. Care must be taken to maintain balance between transfer and vocational-technical programs. Counselors are employed who are interested primarily in college transfer programs --buildings have been built to accommodate such programs--and the institution is well on the road to becoming a respectable "junior college." In this atmosphere, the president, board of trustees, and state agencies try to mandate the development of a meaningful vocational program. Typically, confrontation takes place and a compromise is reached which allows the development of technical programs which are closely allied to the physical sciences and mathematics, and nontransferable. The major emphasis has now become less job oriented. Usually other vocational educational programs are excluded on the grounds that they are on too low a level to deserve college credit. This situation is further irritating because of feelings of insecurity on the part of some members of community college staffs. They feel inferior in qualifications, working conditions, and status to the staff in the traditional colleges and universities which have been in operation for many years.

In this era of contract negotiations, extreme caution must be observed so that governance and control are not given away for the sake of a few dollars. Contracts may so affect the composition of faculty committees that the flexibility for balance of programs or the emphasis in certain divisions may be seriously hampered.

One of the many dilemmas of vocational programs in the community college is that many students who wish to enroll in vocational education programs in postsecondary schools have had no previous vocational education courses. Often they are graduates of a college preparatory curriculum, either because the type of vocational education they wanted was not offered by their high school or they discovered relatively late in their high school career that they were interested in preparation for an occupation outside the professions. It is only proper that these persons should be able to secure the type of vocational education they need in a community college or technical institute. At the same time, however, we find students who have acquired an excellent secondary background in a vocational field who desire further vocational education in a postsecondary school. Too frequently they are given no credit for this earlier instruction and are forced to repeat courses which they completed successfully in high school. The best practical solution to this problem seems to be for the community college to administer proficiency examinations which would allow the student to establish credit in a postsecondary school course regardless of the way in which he acquired the necessary knowledge and skill to pass the examination. Some students could have acquired this skill in secondary schools, some through work experience, and some through private school instruction. Awarding of credit in this manner seems to be unacceptable to most postsecondary school instructors. The community college expects senior colleges to award credit automatically for courses completed in the community college, but they seem unwilling to consider a similar arrangement with the high school. Ideally, the curricula of the secondary and postsecondary schools should be arranged to complement each other. The student who made a decision prior to high school graduation to enter the higher level of occupational fields could have a program which began in the high school, flowed easily into the community college, and if he decided to go further, led naturally into a baccalaureate or even a graduate school program in that occupational field. Such an integrated system of occupational education assumes a career ladder extending from the bottom to the top of an occupational area. More importantly, it assumes that instructional personnel now in all levels of education respect each other and are willing to work together for the good of the student--for after all that's the name of the game and that's why we are in business.

The Role of the Community College President

The community college president, not unlike chief administrative officers of other educational institutions, is answerable to many publics. From these he also seeks understanding, approval, and support. His role is to try to satisfy them all. I am sure you will recognize these publics as being significant to each of you in varying degrees. They are: (1) students; (2) former students and alumni; (3) full and part-time faculty and other professional employees; (4) full and part-time nonacademic employees; (5) the parents of the students; (6) the board of trustees; and (7) advisory committees. Some of the publics which may be categorized as being external to the immediate college family, but no less in importance, are: (1) other educational institutions and organizations in the community; (2) the media--newspapers, television, and radio; (3) business, industrial, and labor leaders; (4) various levels of government, particularly the sponsor of the community college; (5) professional organizations; (6) civic and service organizations; (7) youth-centered organizations; (8) spectators and audiences at various community college events; (9) ethnic groups; (10) political parties; (11) veterans organizations; and (12) church and community welfare groups. One finds himself holding hands with one or more of these groups every day and often several at the same time. The community college president has two major problems to contend with as he deals with his many publics, and like most concerned educators, he must convince the world that occupational programs at all levels are respectable and acceptable. In addition, through his own commitment and public attitude toward occupational education, he must convince the traditional institutions that the community college is a legitimate, responsible, and academically respectable member of the educational system. It has its functions to perform, it is unique, and it need not apologize to anyone unless it becomes deficient. Having sold his contemporaries on the legitimacy of his institution, the community college president must next convince his faculty that it is a proper function of the community college to commit a substantial part of its energies and resources to occupational education and to be, in fact, a true comprehensive community college.

The president often finds himself walking a tightrope, balancing the influences and prejudices of the faculty, legislators, trustees, students, and community. If he is to provide leadership in his role, the president must identify institutional goals and develop courses of action that will achieve these objectives; he must obtain the resources and the staff necessary to achieve these objectives; he must keep lines of communication open to all members of the college family; and he must motivate people toward the creation of an environment which facilitates the desired ends.

The community college president must be an educator and a scholar; proficient in finance, construction, and maintenance; knowledgeable about labor policy; consistently charming; a "bold" position-taker with whom no one can disagree; a consultant of everyone and a follower of all subsequent advice; and a doer of everything--speedily and accurately--through committees. As my colleague said, he should also learn to pray regularly. A community college president neither has the time nor the experience with industry, business, or agriculture to enable him to direct the diverse details involved in managing the operation of the college and, in particular, the occupational education programs. Consequently, he must be a catalyst, innovator, expeditor, and delegate to qualified, technically oriented administrators. He has the specialized task of building a program tailored to the needs of the community. The college president is not only director of the organization's energies, but he also serves as the mediator of personnel and as the public relations bridge between the college and the community being served. Unlike the universities, he cannot afford to let the local community college become an island for it cannot survive community isolation.

The president sets the tone of the institution and must interpret board policies to the public, students, and faculty. He must assume leadership for the development of means and programs for the execution of these policies and give impetus to reform and change. He is the one person who can see the college as a whole, assessing weaknesses and strengths. However, because the president may be ready for change does not indicate the faculty is. Therefore, he has the responsibility for creating readiness for change on the part of the faculty. If the president always made the wisest choice of personnel, then little else would need to be done to guarantee a viable, dynamic, and innovative program for occupational education.

Possible Program Arrangements

Let me share some ideas and programs that we have used or have seen operating elsewhere. They may be normal for some of you; they may not have been meaningful or successful in one setting, but may have been successful in another.

Cooperative Arrangements with Other Schools. In program or curriculum planning, most of us have faced the dilemma, at one time or another, of the feasibility of starting new courses and programs when one or several of the most important ingredients are missing. There may be a definite need and interest for particular programs, but studies show that not enough students can be recruited for the program; or secondly, not enough jobs would be available to make the program worthwhile, or possible equipment or facilities would not be available. One successful idea is that of cooperative arrangements with other schools which have the necessary equipment, such as the local secondary vocational school or the area or regional vocational centers, such as the Board of Cooperative Education Services Center (B.O.C.E.S.) in New York State. In one of the community colleges in New York State, the facilities and laboratories and shops of the B.O.C.E.S. Center are rented by the community college for their occupational programs. The students are enrolled in the college, the program is managed and manned by the college, but the facilities are rented. In our case at Niagara County Community College, we are discussing programs with B.O.C.E.S. By talking to each other, the prior training of some of their graduates when they enroll in our college can be considered.

One-Plus-One Program. Another area of cooperative arrangement is what is known as the one-plus-one program. The student completes his first year of a program at our college (general education courses) and a second year (technical and specialized courses) at another college. Specific arrangements have been made with other two-year colleges for programs in air conditioning and internal combustion engines. Within other cooperative arrangements, we have taken care of students interested in forestry, and we are now in the discussion stage with another two-year college concerning horticulture. It would have been impossible for us to set up these programs for only a few individuals, but we have arranged to provide a valuable service and opportunity to the student. This calls for both colleges to agree that programs offered at one college will be acceptable and creditable in achieving the degree in another college.

Arrangements Between College and Industry. The cooperative efforts between the college and industry can be a major factor in recruiting students for the programs. One plan that appears to have a great deal of merit is to arrange with local industry to hire high school students during the summer vacation periods between the sophomore and junior years, followed by employment between the junior and senior years and after high school graduation. The college and industry can develop a cooperative program which ties in the summer employment with the college programs. This is also a time when young people are seeking their first employment experience; assured summer employment with college orientation could be attractive to them.

It has been suggested and proven to be successful that, if at all feasible, the college should arrange to have business and industry conduct some of their training programs on campus rather than in the plant. Supervisory training and other related programs conducted on a college campus are proven to be more motivating than in-plant classes and more successful. A wide range of relationships with industry can be developed, from the use of a classroom to the use of faculty and equipment. Another arrangement benefiting the college and the business/industry relationship is the possibility of using college facilities for industrial and professional exhibits and shows and meetings, specifically in areas in which training programs are available.

Resident Exposure to Various Programs. An unusual and successful program was one in which a hundred students were brought from various parts of the state to a postsecondary institution campus for five weeks. They lived on campus and participated in an indoctrination of many occupational programs. During the five-week period, each group of twenty students rotated through five different areas of instruction: machine tooling and the graphic arts; electronics, electrical laboratories, and refrigeration; environmental science, small engine repair, mechanical drafting and civil engineering; environmental systems, architectural drafting and the health sciences; and welding, computer programs, and business. Students were scheduled for one week in each of the areas and at certain times of the day had an opportunity of a free choice of another area, such as law enforcement, apprenticeship programs, medical careers, library work, or auto industry occupations.

Other Facilitating Structures

Advisory Committees. I am sure that individual occupational programs have their own advisory committees. However, often it may be advisable to consider the appointment of a general advisory committee for the total range of occupational programs. In order to keep the interest of the advisory committees alive and to recognize that they contribute a lot to a program, the following suggestions are offered. Provide the opportunity for advisory committee members to report to the board of trustees periodically. This creates an atmosphere and mutual feeling of being needed. Arrange to send advisory committee members to regional or state meetings. One of our advisory committee members wrote a report of a recent meeting in New York State and was asked to report personally to the board of trustees. Thereafter, a member of the board of trustees was appointed a permanent member of the advisory committee as a liaison person.

Recruitment Methods. In addition to the traditional open-house activities on campus, plan projects that emphasize specific programs for specific groups or for specified area high schools. Career-day programs can be held at various places off campus, such as at high schools, armories, or other strategically located buildings. Don't underestimate the support that can be generated by involving business, industry, and such service clubs as Rotary or Kiwanis. The local high school counselors should be involved from the early planning stages; they need the total immersion treatment as much or more than the students. It is recommended that in any of the recruitment plans, serious consideration be given to using recent program graduates as guides, speakers, and discussion participants. An excellent team for open-house activities, plant tours, industrial exhibits or career-day programs is a recent graduate and an industrial representative, such as a member of the advisory committee.

College Organization. The college organization is a major factor in keeping viable the occupational programs. Our college is organized into divisions to which a curriculum advisor has been assigned. This curriculum advisor does not replace the regular professional counselor. He is a full-time teacher with a special ability and interest in vocational advisement in his particular area. He or she is given a half-time teaching load to compensate for the time needed to work with or advise students and with other faculty members in his division (all faculty are assigned approximately fifteen advisees). We have found that the curriculum advisor has often been the first person the student would contact regarding *any* problem. A procedure for appropriate referral to the college counseling center has been established for specific types of problems.

To help break down the uncomfortable feeling which exists between the liberal arts and technically oriented faculty, divisions were organized to include, where appropriate and related, departments which traditionally tended to think of themselves as either liberal arts or technical. One division is composed of the mathematics, chemistry, physics, and technology departments. The mathematics, chemistry, and physics faculty were not happy with this arrangement at first, but they are now talking to the technology faculty and are working toward solving common problems. Another division is the lite sciences, made up of nursing, dental assisting, operating room technology, and biology. The problems in this combination were minimal. The social science division composed of the history, government, anthropology, economics, sociology, and psycholcgy faculty had some reservations when we recently included two new associate in applied sciences (A.A.S.) programs--criminal justice and child care.

Campus Information Centers. We have organized two centers on campus, generally for the dissemination of information. In the area of student personnel services, we have established the Center for Occupational Counseling. It was organized to serve both the student body and the general public and provides a counseling service from pre-admission to graduation and placement. It is interesting to note how much use the transfer-type students have made of this service. The Resources Coordination Center is being organized by the child care curriculum for the human services area. A need was expressed by various community groups for such an on-campus center. Some of the services they are considering are: listing all of the organizations that relate to human services and the services they offer; personnel; and a description of the services. This will be cross-indexed and published in a notebook that can be easily updated. The last thought is the general distribution of specific and general brochures relating to occupational programs. Brochures have been distributed in professional offices, banks, supermarkets, and door-to-door. Newspapers can also be used to great advantage by using supplements inserted in the weekend editions. This means of distributing literature has been found to be attractive and profitable for business and could be adopted to educational enterprises.

Conclusion

There is no question that the task of getting the job done is a never ending one and one that cannot be done soon enough for young people. Constant attention and surveillance must be primary considerations if occupational programs are to be productive and successful. The president of a community college must be committed to this concept, set the tone of the institution, and provide the leadership necessary to keep occupational programs viable.

VOCATIONAL EDUCATION FOR OFFENDERS

Charles O. Whitehead
Director, State Technical Institute at Memphis

The responsibilities and responses of vocational education to tough educational problems contribute some of the brighter pages to the history of education in the United States. The Smith-Hughes Act of 1917 was a major contributor to the vast productive ability of both the American farm and the American industry. The National Defense Education Act, the Vocational Education Act of 1963, and the Vocational Education Amendments of 1968 contributed strongly to the current trend of postsecondary education and the requirement "that persons of all ages in all communities of the state . . . will have access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to the needs, interest, and abilities to benefit from such training."[1]

The result of this legislation is the present trend toward career education--the realistic education for the disadvantaged of both the ghetto and Appalachia; the expansion of the home opportunity of the community college, technical institute, or area school; and the increased efforts of retraining of the employed worker and the college graduate who cannot obtain a job because of the over production in many areas of higher education. We have reacted with valor and developed expertise in these wide and varied fields.

---

[1] Public Law 90-576, 90th Congress (Vocational Education Amendments of 1968).

But we in postsecondary occupational education have been negligent in our responsibilities and charter to one category of persons in one of the large communities of our state. I refer to the inmates of our correctional institutions. Your reaction to the "training of convicts" is normal but unwarranted.

Modern penology has developed a new and emerging concept of the treatment and practices for the current offender. There is project first offender, designed to attack the problem of rehabilitation before tenure in a prison compounds the problem. Most correctional officials recognize that a percentage of their population is ready for release from prison before they are legally eligible for release. Behavioral changes are being successfully accomplished for many offenders. Practices of work-release programs for gainful employment outside the walls of the prison are common. Education-release and study-pass programs for inmates to attend school outside the wall are less common for many reasons, most of which are traceable to the antiquated views of educators and the public and not those of penologists. Can we examine our feelings and views--and analyze them in the light of the problems and the errors of present practices? Can we, as vocational educators, use our experience and expertise to help solve another problem of our society?

First, let's look at the problem and review some of the errors that this speaker has observed in his visits to and discussions of many training programs for offenders in many states.

1. It is an accepted fact that the informal training programs in our prisons are the most effective, efficient, and relevant education in the USA. They can take a first offender who is an unlearned, no-skill,

school dropout, and in a three to five-year sentence graduate the polished professional criminal whose degree of expertise in his field of specialization is astounding.

2. We see the educational programs organized and conducted by the Department of Corrections as the third largest public education sector in the U.S. (Schools and colleges are first, and the Department of Labor is second.) Does public education need to continue to waste tax dollars through this trimorphic extravaganza?

3. We see the bachelor's degree syndrome prevalent in education for offenders. We see state and federal programs supporting this ailment. We see correctional officials and offenders deeply involved. We see a success rate that approaches two percent.

4. We see the poorest of educational practices. For example, the incidences of political hacks, educational cast-offs, and retirees who have really retired are high. We observed one group of mature adults, predominately black, whose reading level had been established as fourth grade. They were being taught by a certified elementary school teacher--white, female, fiftyish--from a fourth-grade reader that had been adopted by the state textbook commission for the fourth-grade students of the public schools of that state. Results were very, very close to zero.

5. We see vocational education programs being taught for the reason that "ex-cons" could get jobs in these fields. They were in the custodian, garbage collector, dishwasher, coal miner, farmer, or occupational fields.

As vocational educators, you know the results of training for deadend occupations.

6. We also see vocational programs being conducted solely because the governmental agencies need the services and/or low-paid labor. We in public schools have been guilty of this for years. (Why have the antiquated printing programs survived in many of our school systems?)

7. We found situations where the screening of inmates for educational release was performed by the school system receiving the student. In one case this changed rapidly following an inmate-student's one-way trip to Cuba on a commercial airline--that he hijacked.

8. The conducting of on-campus, education-release programs for offenders was noted in one community college. The hours of the program were from 10 p.m. until 2:30 a.m.; thus, the only students on campus were the inmates. The inmates were bused to and from campus in prison lock-up buses.

Based on our experiences and observations, the actions that are necessary to institute a realistic vocational education program for offenders are as follows:

1. A reliable, realistic, diagnostic, and selection program conducted by the department of correction. Only in this manner can the track record of success approach a degree acceptable to the education community. Only in this manner can the emotionally unstable and the criminal psychopaths be reduced and the discipline problem made livable.

2. A realistic, relevant vocational education program that provides an open door throughout the educational process, rather than just in the admission office. A program that will provide job orientation, work orientation, and the skills to get and hold a job. In addition, the program must provide placement and follow up. The only success of such a program is job placement and continuous employment in the trainee's field.

3. The total vocational educational program should include inside-the-wall training, educational release, and work release. The total program should be built to take advantage of any combination of these three. The program must move the student offender into the normal stream of this student and/or the work world at the earliest practical time.

4. The program must offer remedial training, but this remedial program must not be "more of the same" education that probably originally contributed greatly to the offender being in prison. Remedial math, communications, science, and social studies can be taught as the related courses to a vocational-technical skill. Properly structured and taught to an adult population, the remedial are no longer remedial, no longer more of the same, but now are the support subjects for a skill whose learning is desired. Vocational educators have been using this practice for decades.

5. The program must be both open ended and at the same time provide spin-outs for employment at many levels. A major problem in training offenders is their normally short span of interest. Felt success and observed

achievement must come quickly and often. But at the same time, it must not exclude the possibility of graduation and degrees. Postsecondary vocational education with its certificate programs (serviceman, mechanic), associate degree programs (technician, paraprofessional), and now the opportunities to enter a bachelor's degree program (technologist) combined with planned exit levels for job entry in each of these three programs is ideally suited for offender education.

We in postsecondary vocational-technical education have the experience, the tools, the know-how, and the facility to support the modern penologist with a real educational program.

But we also need a behavioral change on the part of most vocational educators in order to insure any success in this endeavor. We need positive actions on our part.

1. The true willingness to accept a "convict" as a regular student in my school, my class, my school club, and as my fellow student.

2. The willingness to coordinate the policy, rules, and regulations of the school with the policy, rules, and regulations of the correctional institution.

3. The willingness to recognize and to work with the uniqueness of the inmate student. I observed one math class where the instructor would not tell the student that his solution of a math problem was wrong because he feared bodily harm. The school provided adding machines and calculators for the purpose of permitting the student to check his own calculations. Reason--the adding machine

and/or calculator could be more easily repaired or replaced.

4. The willingness to live with the exceptionally high failure rates that are a fact of life in dealing with the inmate and that are normally unacceptable to the vocational educator.

5. The willingness to be conned by the expert con artist, to be tested repeatedly by a person who has never before trusted a single human being, and to be used, walked upon, and possible actually physically abused.

6. The willingness to look, seek, listen, and learn in a completely virgin field of vocational education. I use the word virgin advisably, because to us vocational education spells success, jobs, and employment. When you claim this same connotation for your vocational education for offenders, I assure you that you will absolutely have a first in the field.

I again remind you of your charter, both local, state, and federal, as a vocational educator. I remind you of your experience in the solution or partial solution of many tough or nearly impossible educational problems. I call upon you to meet your charter by tackling another tough, almost impossible educational problem--vocational education for the offender.

References

Fect, Vincent. *What Vocational Education Teachers and Counselors Should Know about Urban Disadvantaged Youth.* Washington, D.C.: ERIC Information Series, 46 VT 013 543, October 1971.

Korim, Andrew S. *Improving Corrections Personnel through Community Colleges.* Washington, D.C.: American Association of Community and Junior Colleges, August 1973.

McCullough, K. Owen; Plott, John; and Homstead, Robert. "Our East Campus is a Correctional Institution." Tallahassee Community College. Mimeographed.

Sheffer, Harold V. "Directed Corrections or Corrected Directions." *Community and Junior College Journal* 43 (August/September 1973).

THE NEW TECHNICAL-INSTITUTE MOVEMENT IN PENNSYLVANIA

Donald Thomas
Director, Curriculum Research and Development
Greater Johnstown Area Vocational-Technical School

The main objective of this presentation is to make you aware of the impact of the new technical-institute movement, and through examples, explain how the technical institute is evolving and operating at the Greater Johnstown Area Vocational-Technical School.

What is the new technical-institute movement? Technical institutes have been around for a long time, but the new technical institute is an outgrowth of adult education programs in area vocational-technical schools. For years vo-tech schools offered and continue to offer adult education courses. The Greater Johnstown Area Vocational-Technical School enrolled over 2000 people in adult programs during the 1972-73 term.

It was found, however, that courses were not meeting the needs of many adults in our area. Our responsibility is to insure that all individuals in school and out have an equal right to vocational education for the attainment of economic independence and the continued development of human potential. We needed a program with broader objectives to serve adults who wanted more than adult courses but less than a degree; courses that would provide individuals with skills to obtain and hold a job.

At this time, we began to plan for our thirteenth and fourteenth-year programs in the postsecondary division of the Greater Johnstown Area Vocational-Technical School. Not all postsecondary programs have to be at the thirteenth or fourteenth-year levels. Federal regulations permit a school to offer less than twelfth-grade work if the needs of the students warrant it. Therefore, the new technical institute is an approved postsecondary school which offers vocational-technical education designed to prepare out-of-school youth and adults for employment.

How did we get from the area vocational-technical school to technical institute status? House Bill 1108, which is now Act 346 (see Appendix G), provided the vehicle. This act allows area vocational-technical schools to organize as technical institutes. Programs and courses must not take more than two years to complete and must increase a student's qualifications for employment. In addition, technical institute programs must be coordinated with those offered in area vocational-technical schools to insure progressive advancement. Previously, only first and second-class school districts were allowed to operate technical institutes. A committee composed of representatives from community colleges, private trade schools, area vocational-technical schools, and the department of education, has developed regulations and standards for the new technical institutes.

Johnstown's Program

In September 1970, we began operating as one of ten full-time area vocational-technical schools in Pennsylvania that were designed to provide students in the Greater Johnstown Area with an opportunity to receive vocational and technical education at the secondary school level. (Technical education begins at the high school level; it is not synonomous with postsecondary education.)

In October of 1970, we extended our program by opening the doors to adults at night. At about the end of the first semester in the 1970-71 school year, I was authorized by our administrative director to do the research necessary for establishing thirteenth and fourteenth-year programs to begin in June. In 1967, the director included plans for postsecondary programs in our application for approval to operate an area vocational-technical school. Being new to vocational-technical education, I thought all schools were doing this, so I accepted the assignment without reservations. It didn't take too much research for me to find out that what we wanted to do wasn't being done in too many places.

Since that time, we have established a number of postsecondary programs within the guidelines set down in Act 346. Our present objectives are to:

1. Provide students with an alternative to baccalaureate or associate degree programs, and thus fill a void in the educational system.

2. Work with business and industrial leaders to gear our programs to the local labor market.

3. Offer well planned programs with supporting services that will greatly increase the students' chances for employment.

4. Gain a reputation by providing quality educational programs that are continually evaluated and upgraded.

It should be noted that we do not want to compete with community colleges; however, where both institutions exist, a policy must be established to insure coordinated programs and a steady progression of learning. We are proud of the success we have had in the placement of our first post-secondary graduating class. Employers of members of this first graduating class have the highest esteem for the school and its staff, because it is through students, and later graduates, that a school's reputation is fostered and perpetuated.

We believe that our program is growing and attracting local residents for two reasons: (1) we have a large group of adults who either can't afford or don't want existing degree-granting programs; and (2) we don't have a community college in our area. In relationship to the community college program, the basic difference is that we offer more technical and skill training and less academic work (approximately 70 to 30 percent).

Following are some characteristics of our two-year program students: The average age for males is 20; for females, 19. A total of 15 percent are veterans. Fifty-four percent hold part-time jobs and 40 percent have completed the college preparatory course in high school.

Basic program strengths that we have identified include:

1. A well-developed curriculum.
2. Good student attendance.
3. A good mixture of hands-on experience and academic work.
4. Successful placement of students.
5. High teacher morale and dedication.
6. Excellent physical facilities.

7. Good relationship with the University of Pittsburgh at Johnstown.

8. Considerable resources available through the Pennsylvania Bureau of Vocational Education.

Basic weaknesses are:

1. Difficulty in staffing and conducting in-service training sessions.

2. Difficulty in coordinating the secondary and postsecondary programs.

3. Need to have counselors in our area who possess a better understanding of the scope of our program.

4. Need to consider offering a degree which many students now want but which is not now available.

5. Need for employers to better understand what we are doing.

In summary, the major importance of the new technical-institute movement is that it provides individuals with an opportunity to enroll in postsecondary vocational programs of the type that didn't exist in the area prior to legislation.

REFERENCES

Act 346, *AVTS Technical Institutes.*

Act 484, *Community College Act.*

Bureau of Vocational Education, *Questions Most Often Asked About Post Secondary Education.* Revised October 1971.

Jacoby, Robert. "Program and Curriculum Articulation Secondary and Post Secondary Occupational Education." Presented at the 4th Annual Postsecondary Conference, The Pennsylvania State University, October 1972.

Pennsylvania Department of Education, Bureau of Vocational Education. *Proposed Regulations and Standards for Post High School Vocational and Technical Programs.* Revised September 17, 1973.

State Board of Private Business Schools. *Rules and Regulations Governing Private Business Schools and Agents,* Department of Education. Amended August 7, 1969.

THE FEASIBILITY OF CREDIT EXCHANGE BETWEEN AVTS AND THE COMMUNITY COLLEGE

John G. Berrier
President
Lehigh County Community College

As a prelude to the theme of this paper, it is necessary to "set the stage." I am referring to the manner in which tradition influences our behavior. Or perhaps, it's the attitude, "it was good enough for me, why change it."

A few examples can be cited here; for instance, admissions and tests. For several years, colleges could pick and choose the so-called "cream-of-the-crop" from the high school graduating classes. A mediocre or a poor student had no opportunity. College admissions' people were overwhelmed with large numbers of applications. Many forgot or never knew that before the surge, practically anyone who applied was admitted.

I remember a World War II veteran who, despite his last position in a large graduation class, knew he could "cut the mustard" and achieve better than average grades. He convinced admissions that he should at least take the exams. His results placed him in the top 10 percent. He was admitted to pre-law where he performed outstandingly well--all "A's" for two years; after three years at Yale Law School--all "A's" again--he has become affiliated with a very large law firm.

Another case is of a young lady who dropped her transcript from the University of Pennsylvania on the desk, a psychology major, Phi Beta Kappa. She said, "Four years ago you said I was not college material. Obviously, you were wrong." Everyone who has had several years of admissions experience has seen cases like these again and again.

When the comprehensive community colleges began in Pennsylvania and elsewhere, traditional college and university personnel looked down their noses at the schools and their graduates. These were last-chance colleges with students who couldn't make the grade. Well, several of these last-chance graduates were admitted to prestigious institutions and performed very well. Now community college graduates desiring transfer have a reasonable chance.

Several years ago when the University of Chicago admitted high school juniors and seniors, there was lively debate and much discussion; however, the youngsters proved to be quite capable.

Credit by examination through ETS, CLEP, and several other programs has attained general acceptance. Many high school graduates now enter college with several credits applicable toward the baccalaureate degree.

With this background and with members of a staff who were trying to help all students, it was easy to bring about a desire to work with other colleges and with area vocational-technical schools. Several faculty members, accompanied by the dean of technologies, paid visits to the AVTSs and worked out plans for awarding credit on the basis of subject matter and skills covered and required in the courses of study. For instance, a graduate of one AVTS majoring in electronics enrolls in an electronics curriculum at the college. He is awarded nine credits which may apply toward his degree. The same number of credits does not apply to graduates of every AVTS.

Community colleges in Pennsylvania were developed as comprehensive schools. Each college, after extensive surveys of the community needs, and working with lay advisory committees, attempted to provide the programs or curriculums that the supporting community wanted. The community college was not bound by tradition. It could offer almost any kind of program, could set it up, and have it operating in a short time. A traditional college cannot respond to the needs of the community so promptly. As a result, the community colleges have introduced programs of study differing to a great extent from the curriculums provided by traditional four-year institutions.

The first two years of a regular four-year baccalaureate program were not followed because the community college trustees and administrators had not intended their programs to be the basis for continued study toward the four-year degree. However, to their delight, and perhaps bewilderment, some of the graduates of these curriculums began to seek admission to some of our highly regarded four-year institutions and were admitted with credit for most of their community college work. Furthermore, these same students performed very well academically at the new institutions. Many more community college graduates of technical or career programs began to find their way to four-year colleges.

Initially, some of the four-year institutions looked down on the community college, knowing that its students were not "college level." Many faculty members from these same schools erected all kinds of barriers to keep out the community college graduate. However, some of the community college kids were accepted at some of our more prestigious schools where they performed as well as any other student. Their academic achievement generally was as good as or better than expected. Graduates have now been accepted by most colleges and by most faculties.

Many of us no longer refer to programs as transfer or nontransfer, as were the original captions. Graduates of the two-year business, education, engineering, etc., curriculums find satisfactory employment without going on to the baccalaureate level. The receiving college makes the decision, not the community college. However, we provide all we can in the way of a balanced program which will serve the graduates--whatever their decision after leaving us.

Some experiences over the years demonstrate changes that are taking place. For instance, the University of Chicago accepted students who had completed the sophomore or the junior year in high school. Their grades were top level and their social potential seemed high. Many were successful, some fell by the way.

In Harrisburg, the Harrisburg Area Center for Higher Education invited students from the local high schools to enter classes in which they had good grades and keen interest. The high school counselor and principal were consulted and made recommendations in the student's behalf or he was not admitted. These kids did well and received both high school and college credits.

Another experiment which lasted for a few years was between Camp Hill School District and Harrisburg Area Community College. The superintendent of schools at Camp Hill was rather progressive. High school seniors were able to take regular HACC courses in their own schools taught by their own faculty. Faculty members were screened, required to use the college division course outline, and evaluated from time to time. Credits were accepted by colleges wherever these students matriculated. They received both high school and college credit for the same course.

At Lehigh County Community College, a student from one of the local high schools spent his senior year at the college and was an honor student throughout the year. Another school in this area provides instruction in English using the college course outline and plans. The students stay at their own school and are taught by their own teachers. The college provides a supervisor who works with that teacher.

Students from the area vocational-technical school are taking typing, data processing, and food service classes at the college. We know what their achievement has been. All of this experience to which I have referred has given us great confidence in the work of our youth and in the abilities of the high school teachers.

We are gaining more and more information about people in general through GED, college level tests, CLEP, and other tests. We also encourage students to "challenge" a course whenever they feel capable of taking an exam and passing a test. Why should anyone be forced to "sit through" when he already has the knowledge? He can turn his thoughts and attention into other areas.

We have another situation that may be unique, in that some of our students have attended classes at the area vocational-technical school using equipment that the college would not be able to justify on an occasional-use basis. Our students work in the AVTS data center, and AVTS students come to our center for work on a computer that is different from theirs. Students of each school attend the other school in food service areas for instruction at no charge.

There are additional cooperative practices that encourage us to reciprocate and award credit on a basis somewhat different from the ordinary.

On the basis of much cooperation and studies, the evening school program for adults in drafting and electronics has been reviewed. We have now designated AVTS as the unit to offer all basic courses in these areas; the community college offers the advanced courses. This arrangement eliminates duplication of services and reduces instructional costs. As is the case with most community colleges, great emphasis is based upon student counseling. Counselors are available to the AVTS students who attend the community college, day or evening.

Since we have such close contact and such good working relations, we feel justified in doing what we are doing with credit exchange.

PROJECT VAULT (VOCATIONAL ACADEMIC UNIT LEARNING THROUGH TECHNOLOGY): WHAT IT IS AND WHAT IT DOES

David G. Minnis
Assistant Director
Federal Educational Projects Center

Introduction

The underlying and fundamental purpose of public education in the United States is that of "preparing the young to live a productive and rewarding life." Yet, educational statistics reveal that approximately 2.5 million youngsters leave the educational system each year without an adequate preparation for such a life. To these youngsters the American educational system is a failure!

Such a failure has provoked the question: "what can be done?"--a question reaching all the way from the preschool classroom, to the local school administrator, to the chief state school officer, and even to the U. S. Office of Education. It is a question that encompasses school systems ranging from ghetto schools to the wealthy suburban systems and touches on children of all races, colors, and creeds.

When similar questions have emerged in the past, schools have usually reacted by simply adding another sequence of courses to their present offerings. Such was the case, in part, with the inception of the "academy" and again with "vocational" programs in their initial stages. However, history reveals that such an approach would probably not solve the problem facing American education at this time because today's question encompasses and envelops all present curricula. It seems that what we need now is not another curriculum, but rather more appropriate learning experiences and curricula to meet the needs and desires of students while serving the purposes of society. In reality, today's situation demands more than an addition of curricula--it requires a comprehensive examination of the total school program for today's student.

Voicing this need for a comprehensive examination of the school program are two contemporary educational critics, Mario D. Fantini and Gerald Weinstein. They have advanced two propositions regarding today's situation.

1. We are laboring to serve the needs of academic subjects, not the needs of children.
2. There is less wrong with the learner (the product of education) than with the process and institutions by which he is taught.

In addition to these propositions, students are clamoring for relevancy; school drop-out statistics remain high in spite of efforts to keep youth in school; and, youth unemployment is a critical problem. These propositions and events seem only to amplify the need for an immediate and comprehensive examination of the school program.

Dorothy Cohen has summarized the present school situation succinctly in her statement: "Education has deteriorated into a pumping of information into persons without regard for the fact that a life satisfying to human beings is one shaped in terms of human relationships. The capacity to love and the capacity to work make more sense than one in a pushbutton civilization so managed as to rob individuals of their deepest sense of self as men and women of dignity."[1]

Such, then, is a perspective of today's school situation. It demands action designed to reform the educational system in an effort to reduce the failures. Documentation of the existence of the situation is the inception and development of the present-day vocational-technical and middle-schools across the nation.

Overview

Vocational-technical schools in Pennsylvania are emerging as an important factor in public education. This growth has not been without pains or problems. Many of the problems still exist in a very large sense as more and more of the unresolved needs of these vocational-technical students have a long precedent of neglect by academic public education. The existence of the vocational-technical school stands as testimony to this academic failure.

The concept embodied in the design of the VAULT model is an attempt to approach some of the basic problems facing vocational-technical students in today's schools. It does this through correlation of the vocational-technical aspect of the child's education with his academic education. It also serves as a means of averting a possible failure in vocational education brought about by the development of an academic syndrome. This failure could occur if a student's needs are not met and his interests are not taken into account--a condition existing in many vocational-technical programs today.

---

[1] Dorothy H. Cohen, *The Learning Child* (New York: Pantheon Books, Random House, 1972), p. 347.

The title of this model, "VAULT," is itself an acronym that succinctly describes the concept of the model and its approach--*Vocational Academic Unit Learning Through Technology*.

Needs

It has been previously stated that the VAULT model is a viable approach to some of the reform needs of today's schools. However, the foremost question must be: "What are the needs and how important are these needs that the model attempts?" Four of those needs are briefly explained below:

1. Vocational-technical students need to have a child-centered curriculum which articulates that which is learned in the vocational-technical with that of the academic.

   The current fragmentation of the curriculum borders on the ludicrous, for nothing taught outside the vo-tech world has any relationship to any other subject taught. English is taught separately from social studies, which is separate from the sciences, and none of these have any apparent relationship with vocational subjects. Core curriculums were a step in the right direction but these have failed from a lack of realistic unification. Generally, the core was some academic fragment (such as the Civil War in the social studies and American literature) rather than a realistic child-centered core. The vocational-technical field and the VAULT model can overcome this because the *core* should be the vocational skill or interest itself, thereby making the academic skill relevant to the student's needs and interests.

2. Vocational-technical students need to have subject matter which is more pertinent to their vocational concerns than that offered by the current academic material which presupposes that the student wishes to become a scholar.

   The fact must be faced that despite much time, effort, and money, American high schools are still basically college preparatory institutions. Often the academic subjects offered students who do not wish to become college students are nothing more than slightly watered-down copies of the college-prep course. Because of this and similar conditions, these courses have little meaning, relevancy, and interest to a vast number of pupils; but perhaps more frightening is the fact that they offer very little in the way of development of learning skills or even skills in helping the child grow and mature. Statistics reveal that many of these courses may actually be detrimental to the child's mental health and developmental patterns. This, in part, is due to the fact that students in such courses often have low self-concepts resulting in little confidence and accompanied by a lack of initiative. Such detrimental mental health and developmental patterns learned during the student's formative years can have far-reaching effects --both on the child and upon society itself.

3. Vocational-technical students need to learn through individualized instruction as much, if not more, than the academic students.

   Much lip service is given to individualizing instruction, but rarely is much done. The problems of individualization are vast, but they should and can be overcome. It seems to be of utmost importance that the area of concentration for individualizing instruction be focused on the vocational-technical student who is not part of the college "in-group." The vocational-technical needs to be individually encouraged, and he needs individualized skills to begin his immediate quest into the working world. There should not be any procrastinating with supplying this student with the tools, skills, confidence, and mental stability to survive and function in that world in order to achieve a meaningful, good life.

4. Vocational-technical programs need to be developed which are easily adaptable on a low-cost basis by other school systems both within and without the State of Pennsylvania.

   Federally funded curriculum programs have often shown initial progress in this direction, but they have demonstrated little practicality. There is obviously a definite need to develop a program that has an ease of adaptability. The cost must be low enought that almost all districts can make some use of the program regardless of funding; i.e., with current curriculum and material budgets.

> It is also necessary that such a program readily fit the ERIC and the RISE system for both national and state dissemination.

The Agency

The realization of the need for reform in educational experiences involving the vocational-technical student has been felt and subsequently voiced by many educators and educational institutions. For example, Kenneth Hoyt says that career education, of which vocational-technical education is a real part, is "the total effort of public education and the community aimed at helping all individuals to become more familiar with the values of work-oriented society, to integrate these values into their lives in such a way that work becomes possible, meaningful, and satisfying to each individual."[2]

However, the mere voicing of a problem seldom provokes the necessary actions to remedy the problem. Rather, it seems that the voicing permits a "venting" of the ire and tensions toward the problem, and then apathy again returns. Such was not the case with the Federal Educational Projects Center (FEPC), because this agency decided to initiate a positive action toward attempting a solution to the needed reforms.

It was natural that the FEPC should attempt a solution because it developed as an agency responsible to a consortium of five school districts in three counties of northwestern Pennsylvania. The school districts felt that a cooperative effort to meet similar needs would be more practical and feasible than individual efforts by an individual school district. As a result, the FEPC was established as the central agency.

---

[2] Kenneth B. Hoyt et al., *Career Education: What It Is and How To Do It* (Salt Lake City: Olympus Publishing Company, 1972), pp. 1-5.

The FEPC, under the leadership of James Peters, Director, and David Minnis, Assistant Director, assumed the responsibility for planning, developing, and operating educational projects sponsored under the auspices of federal and state funding. Operations are supervised by the authorized representative of the Crawford Central School District Board of Directors.

Functioning since April 1966, the Center has gained experience in the various facets of operating federal educational projects. Essentially, the Center has been concerned with the Elementary and Secondary Education Act of 1965 and with the Vocational Amendment of 1968.

In the summer of 1971, Project VAULT was made possible by a grant approved by the Research Coordinating Unit of the Bureau of the Vocational-Technical and Continuing Education of the Pennsylvania State Department of Education. The project was to unify and individualize vocational and academic education through the use of a computer-retrieval system. The program employs a computer to aid the teacher in his/her decision making about instructional objectives, content, instructional activities, resources, and evaluation techniques. Initially four VAULT units were developed to bridge the gap between academic and vocational-technical education. The VAULT units were written specifically for the vocational-technical learner and this underlying concept was basic to all the original VAULT units.

The VAULT Unit

Having made an initial determination of the particular needs of vocational-technical students from the five concerned school districts, the FEPC office was faced with the task of meeting particular students needs with a feasible, monetarily practical, and readily adaptable program suited to the individual school systems. Such constraints required considerable research and extended investigations.

During the months of investigation, the FEPC staff researched the available data and observed many of the more unique programs for meeting student needs. Among these programs was a Computer Based Resource Units (CBRU) program in New York State. This program, developed in 1964 under the direction of Dr. Robert S. Harnack[3] of the State University of New York at Buffalo, is a means of improving curriculum. The program utilizes electronic computers which are programmed so that a teacher, or a teaching team, interested in teaching a specific unit to a class can get from a resource unit only those suggestions pertinent to the objective he wishes to teach and to the individual characteristics of the pupils in his class. In other words, a program was developed to identify from a resource unit only the pertinent items needed to help a teacher preplan a teaching unit.

It is important not to confuse CBRU with Computer Assisted Instruction (CAI). CAI is programmed instruction--the student works his way through a linear or branching program on a computer. Such instruction may or may not meet his needs, interests, or concerns. On the other hand, CBRU is pupil-teacher developed and oriented rather than pupil-machine. The CBRU program is not prescribed, but is jointly decided at each phase by both the teacher and the individual pupil. The pupil interacts with other people rather than with the computer.

---

[3] Robert S. Harnack, "Curriculum Based Resource Unit," unpublished (Buffalo: State University College of Buffalo).

The CBRU program functions in the following manner:

1. A multi-option program is developed in each subject area around concerns and needs of pupils, objectives to be reached, content of these objectives, resources both human and other to help meet the objectives, and evaluation to ascertain if objectives are reached. This total program is placed in the computer.

2. The student and teacher sit down and discuss student interests and concerns. The student is also profiled as to age, reading ability, sex, math ability, etc. The profile, plus the interest and concerns, are fed into the computer and a series of objectives which fit the student are printed.

3. The student and teacher select the objectives which interest the student.

4. The student and teacher select activities and resources in the same manner.

5. The student feeds his selections to the computer; it prints his completed individualized program based on his interests. The materials and resources proposed are within constraints of that subject content.

6. The student conducts his program and completes his evaluation.

7. Self-evaluation by the staff and students makes a continuous progress-type curriculum development. Parts of the program which receive little use or negative evaluations are dropped. Teachers make input at any time to any portion, thus insuring continuous growth.

   Note: This is oversimplified as many other options and variations are available, but it gives a brief explanation of the operation.

The CBRU program has been briefly described because this program offers a large number of potential avenues for developing a model to meet the more particular needs of the FEPC task. It was the combination of these potential avenues with the particular needs of the students, the constraints of the five school districts, and the size of the available vocational-technical school's computer that was used to develop the VAULT model.

The Unit Approach

Among the desirable characteristics observed in the CBRU program was the utilization of the "unit" technique. Available data pertaining to the past decade revealed that changes in the structure and organization of subject matter, new patterns for staff utilization, new instructional resources and techniques, as well as a philosophical move toward individualization of instruction, had become a major education movement within a short period of time. The rapid rate of change in these movements has caused an unusual amount of curriculum planning confusion and has complicated the decision making which both elementary and secondary personnel must do.

Dr. Robert Harnack explains some of this confusion when he states: "The teacher in the elementary or secondary school today is confronted by dual expectancies. On the one hand, he is expected to organize and present units of instruction with imagination and authority; on the other, he is urged to individualize instruction in such a way as to assure the best development of students' special talents. Too often, neither of these expectancies is achieved because the teacher needs planning help."[4]

The following pages describe a program and model which can aid the teacher in the complicated planning task. It is a program which employs the computer as a tool to aid teachers in pre-planning teaching-learning situations for the total classroom, for small groups, and/or for individual students. Basically, the computer serves as a retrieval system designed to aid the teacher in his decision making about classroom objectives, subject-matter content, instructional activities, resource materials or persons, and evaluation devices or criteria.

Dr. Robert Harnack explains the advantages of effectively applying electronic processing equipment to relate the unit components to the needs and respective abilities of individual students, small groups, and large groups within the context of the unit approach.

---

[4] Robert S. Harnack, *Computer-Based Curriculum Planning* (Buffalo: Center for Curriculum Planning, State University of New York at Buffalo, April 1972), p. 1.

The unit approach has always been highly respected as a curricular vehicle which encouraged the professional teacher to make such decisions about teaching-learning situations. Lack of teacher pre-planning time to make intelligent decisions has resulted in making this approach ineffective. Now, experience has shown that data processing equipment can be employed by teachers to overcome the time-consuming disadvantages of the unit approach.

Today hundreds of experienced teachers are using nothing but the unit approach. The author knows of no pertinent statement which refutes the unit approach concept, degrades its usage, or speaks ill of its potential for efficient learning. Nevertheless, all who believe in and practice the unit approach have spent many fascinating but fruitless hours seeking answers to why this approach has not been universally adopted. Some of the answers are reviewed here because of their pertinence to computer-based curriculum planning.

First, successful use of the unit approach is dependent on teacher decision making which requires high-level capabilities. For example, teacher decisions have to be made about choice of subject matter for the unit and the relationship of this subject matter to the major social functions, the immediate needs and characteristics of the pupils in the classroom, and the unit objectives (provided these screens are used as a basis for selection in regard to the total scope and sequence of the schools' offerings). Additional decisions have to be made regarding the organization of subject matter, curricular approaches, developmental activities, culminating activities, instructional materials, classroom techniques, and measuring devices.

Second, a reservoir of ideas is essential to such decision making. The lack of this reservoir prevents the adoption of the unit approach. Obviously, a specific outline of subject matter, a specific textbook, a specific classroom methodology, and specific measuring devices remove any necessity for decision making, and when a teacher is professional enough to know and use the screens of selection, a reservoir or a collection of objectives, activities, materials of instruction, and measuring devices focused on a series of topics must be made available for the teacher. This need, of course, led to the development of the resource unit concept in 1938, and the subsequent writings and studies on resource units by Hanna, Biddick, and Quillan.[5]

Third, although the resource unit offers in itself a vague planning guide for intelligent direction of classroom activities, teachers find it necessary to explore and canvass

---

[5] Lavone A. Hanna, "Source Units," *Stanford Social Education Investigation Bulletin* No. 1 (mimeographed), September 1939. Mildred Biddick, *Preparation and Use of Resource Units* (New York: The Progressive Education Association, 1940). Quillan, *Preparation and Use of Resource Units* (New York: The Progressive Education Association, 1940).

> the narrow "live" possibilities of these instructional reservoirs beforehand. When a teacher moves from a limited base for selecting, organizing, and developing learning activities for the classroom to a much broader base which permits many kinds and degrees of development, pre-planning time is realistically necessary in order for the teacher to gain some confidence and security before he steps before the pupils in the classroom.
>
> During the years many a professional, experienced teacher trying desperately to use unit teaching found that he knew enough professional education to apply the broader screens of selection; and he found by working with others that he could identify and gather some of the ideas and materials necessary for classroom teaching-learning experiences, but he could not find the professional pre-planning time to do the whole task of unit teaching intelligently."[6]

The VAULT program employs the computer to aid the teacher in pre-planning teacher-learning situations for the vocational student. Through the development of resource guides, the teacher and the vocational student cooperatively plan an instructional program appropriate to the specific needs and interests of the student by considering the student's unique personal characteristics as well as the overall instructional objectives of the teacher.

---

[6] Harnack, *Computer-Based Curriculum Planning*, pp. 2-3.

The design of the VAULT model enables the program to achieve both unification and individualization. Unification is attained through the curriculum aspect of the career education program which refocuses basic subject areas (math, science, language arts, and social studies) in such a manner that they are presented in terms of the student's career interests. The major benefit of refocusing is that school immediately becomes more relevant. What is studied should bear directly and specifically on the student's planned career and interests.

Individualization is achieved in this program by using the computer as a storage bank for information and as a retrieval system to make it not only possible but also practical to focus the educational program on the individual student. Under the cooperation and direction of the teacher, the student continuously makes choices and decisions as to objectives appropriate to him, activities to complete, and evaluation devices. Thus, the VAULT program not only aims at increasing the student's learning experiences but also focuses on giving him the confidence that somes from the knowledge that he is free to develop and unfold in his own unique way.

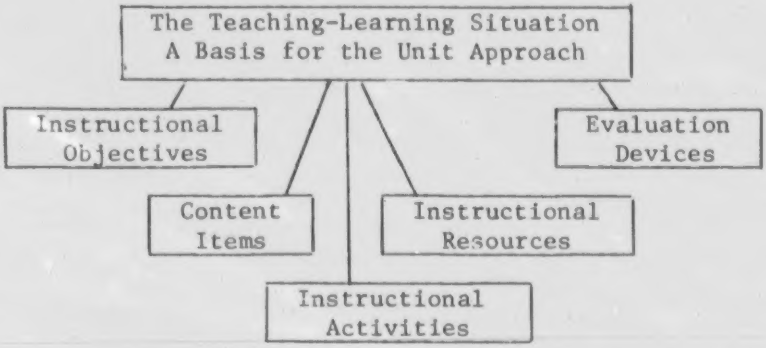
The VAULT model enables teachers to build resource units around a vocational cluster or around a particular skill in relation to a vocational interest. Once developed, the unit components are available not only for student individualization, but also for pre-planning purposes by the teacher. The immediate availability of unit abstracts eliminates the need for costly teacher time in planning and searching for resources while actively managing the classroom. An additional benefit of the units is that they are developed by teams of teachers, thereby giving the individual teacher the advantage of the thoughts and expertise of professional colleagues.

The model design is so flexible that its limitations are only set by lack of imagination on the part of the unit developers. The unit components can incorporate any or all of the major skills and the usability of the units is limited only by the teaching staff. In brief, the model design uses a retrieval system based on professional and student variables which enables the classroom teacher to do whatever he chooses.

The VAULT Model

The next task, and probably the most important one, was the development of the specific design for the model to be used in the VAULT program. To accomplish the design, these factors were incorporated: (1) a technique of correlating vo-tech and academic education--teams of writers from both academic areas; (2) the technique whereby specific student interests and needs could be met--unit focused on the vocational-technical student; (3) a means of reducing teacher pre-planning time to enhance use of the program--the computer-retrieval system; (4) a means for low-cost area adaptability--the use of a specific computer located at the Crawford County Area Vocational-Technical School; (5) the means whereby the program met the needs of the same student in both school situations without fragmentation of either curriculum--the unit approach; and, (6) a technique which would permit teachers, if they chose, to individualize within the so-called "self-contained" classroom--emphasis on a reservoir of individual, small group, and large group activities for each objective. Each of these factors served as a constraint in the design of the specific model for the VAULT program, and the combination of these factors precluded the simple adoption of any known existing model. The interplay of these factors led to the formulation of the specific model.

Schematically, the model may be represented as:


The Teaching-Learning Situation
A Basis for the Unit Approach
Instructional Objectives
Evaluation Devices
Content Items
Instructional Resources
Instructional Activities

Operation I

The development of a Resource Unit for the VAULT model involves two distinct, separate, but equally important operations. The first operation involves production of the software; i.e., the writing of instructional objectives (behavioral), activities, content, resources, and measuring devices.

Having decided on a unit theme, those persons responsible for formulating the software (unit writers) must produce a series of instructional objectives related to the topic. Subsequently, the components, instructional activities, content, resources, and evaluation devices which are related to one or more of the objectives must be designated.

The production of these five components involves a great deal of professional expertise and creativity so that hundreds of objectives, materials, content items, activities, and evaluation items will be available to the teachers for his/her students who possess a wide variety of interests, needs, and aptitudes.

Operation II

The second operation involves the coding of the aforementioned components in order to prepare them for computer retrieval. Each component is assigned an identification number, and through the use of coding forms, every activity, content item, resource, and evaluation device is coded to every objective to which it is related. In many instances, one activity may be related to two, three, or more objectives. Subsequently, each objective activity, resource, evaluation device, and content item is coded to several learner characteristics so that, for example, an instructional resource is assigned to its appropriate "reading level." Other learner characteristics include: mental ability, study area, and career interests.

Once these two operations have been completed, individuals with the necessary skills feed all of the written and coded information into the computer. The result is a computer-based unit stored on magnetic tape for transferral to disk when retrieval is desired by teachers.

Some changes and refinements to the model have come about as a result of classroom usage, changing school needs, unit-writer experiences, and overall program sophistication. For example, the original VAULT project focused on the needs and interests of the vocational-technical student in the academic (home school) classroom. When the teachers used the resource units in their individual classrooms, they discovered that the unit met the needs of the four or five vocational-technical students in the class--the primary objective of the original VAULT project. However, they also discovered that this factor created another problem. In brief, the problem was one of meeting only the individual needs of a limited number of the students and not the room. As a result, the program increased the individualization of instruction for a few at the expense of needed time to individualize for all students. The teachers found that they were being asked to conduct classes within one classroom with two differing instructional techniques in operation simultaneously. Later VAULT projects developed resource units which could be used by students in any of the varied curricula of the school, thereby enhancing the possibility of a more "open" classroom atmosphere with far greater potential for individualization of instruction.

A second refinement to the model was that of "structuring" the development of the resource unit. Original units were more loosely structured than the later units. As previously stated, the original units were written by teachers with little or no previous curriculum-writing experience, and as a result, the structuring was less rigid in order to induce an atmosphere of creativity. Having once gained some experience in this task, the teachers felt more confident in their new role, and many of the teachers who had been employed to write original units were again members of unit teams for the second and third-year VAULT projects.

The creativity desired in the first units was not lost with the more structured approach to the later units. The increased confidence of the teachers enabled later units to be developed which contained even more creativity while fulfilling greater expectancies for resource units. Among the increased expectancies were: (1) a greater use of human and community resource, rather than simple reliance on printed sources; (2) objectives of a broader scope to meet the increased needs of students from differing curricula; (3) more varied and relevant types of activities for the teacher and the student; (4) more activities pertinent to the affective and conative domains; (5) a change in evaluation from simply suggesting a device, such as a written report, to suggestions for criterion--measurement devices; and (6) a change in content items to meet greater reading differences, as well as interests and needs of the students. Each of these changes came about as a result of increased classroom usage, constant feedback from teachers and students, and recommendations from staff and experts in the field.

Producing the Software

Before one examines the direct and indirect processes involved in the actual writing of a VAULT resource unit, "resource unit" and "resource guide" should be defined.

A *resource unit* is a large reservoir of suggestions and ideas relating to a single unit topic which the teacher may utilize for pre-planning a teaching unit. These resource units contain many statements of objectives, subject matter or content, instructional activities, instructional materials and resources, and measuring (evaluation) devices or criteria about a specific theme. In the VAULT model, the computer-retrieval system provided the teacher and/or student with the means by which specific objectives are selected. These objectives and the pertinent professional and student variables are sent to the computer which then selects and returns only those items from the unit which have a relationship to the objectives and variables selected. That portion of the unit which is retrieved from the computer by the teacher is called a resource guide.

What is a Resource Guide?

There are four different but related guides: (1) the VAULT Pre-Planning Resource Guide (generated from the teacher's request form); (2) the VAULT Resource Guide (generated from the student's resource form); (3) the Small Group Instructional Guide; and, (4) the Class Summary. The resource guide is an abstract of numerous content items, activities, instructional resources, and evaluation devices that were determined by the selection of the objectives and variables.

The VAULT Pre-Planning Resource Guide is used by the classroom teacher for planning and organizing a teaching unit. The VAULT Resource Guide is a unique, personalized student study guide which allows for the individualization of the unit.

The Small Group Instructional Guide is used by the classroom teacher as a resource for grouping and directing small group activities. Groupings are determined by the student's choice of objectives.

The Class Summary Guide offers the teacher a list of all the suggested resources for those objectives chosen by the individual students. It also lists the evaluation devices appropriate for the objectives, and the names of the students electing that type of evaluation. In brief, the

Class Summary Guide is one more time-saving device provided the teacher to aid professional decision making.

These definitions are offered to avoid communication problems as the process in each operation of the resource unit is explained.

The Processes of Operation I (Software)

The correlation of the vocational-technical aspect of the child's education with his academic education was the priority issue in the development of these VAULT units. One means of achieving that correlation was to "core" the units around student needs and interests in the vocational field. However, such a correlation might only be superficial if the unit writers represented only one of the two areas. Therefore, the FEPC staff selected teams of professional teachers from both areas to write the units. Appendix I contains the listing of these team members.

The decision to select teams of writers from both areas enhanced the concept of correlation in two important ways: (1) the vocational-technical student became the subject of mutual concern; and, (2) a dialogue ensued between team members which permitted each side to share the other's views and feelings. As a result, any input into the resource unit represented the professional decisions of the team members collectively as to what was both appropriate and feasible for these students. It was, perhaps, this continued two-way communication process that virtually ensured the correlation necessary to meet the VAULT project objectives.

To complement the teachers on each team, the FEPC staff added two other professional members. The first member was a professional consultant, selected for each team, and the consultant's role was to assure that the teachers concerned themselves not only with factual data about the subject matter of the unit (the cognitive domain), but also with the student's feelings about the unit and its learning experiences (the affective domain), plus whatever psychomotor skills (the conative domain) were relevant to the development of the unit. Each team and consultant was also aided by another professional member--an FEPC staff curriculum coordinator. Thus, each unit team contained professional members from three areas: (1) teachers representing both areas of the student's education; (2) a consultant; and, (3) an FEPC staff curriculum coordinator.

As soon as the membership of each team was constituted, they began to develop a VAULT resource unit. The first step was the selection of a specific unit theme (topic) for development. It had to concern some aspect of the student's vocational-technical education which related directly to his academic education. The first four unit themes selected were: "Unions" for social studies classes; "Linear Measurement" for the mathematics classes; "Organic Materials" for science classes; and "Description" for language arts classes. In determining the specific topic for unit development, team members decided that the topic chosen met a student's needs for his vocational-technical educational education and had a definite relationship to his academic education.

Once the specific selection of a topic was determined, team members were ready to develop a large reservoir of ideas for each of the resource unit's components. It was at this point that the planned individual expertise of each team member came into play. This interplay of expertise and ideas was planned because it was the design of the project for as many opinions and thoughts as possible to be considered in the input of the resource unit. In this manner, the input might appeal to a greater variety of student needs and interests as well as offering a greater number of teaching suggestions.

Developing the Software

The development of a resource unit for the computer-retrieval model requires five component parts: (1) instruction objectives; (2) related content items; (3) instructional activities to achieve the objective; (4) appropriate resource materials to aid in the objective achievement; and, (5) measurement devices to determine if the objective has been achieved. However, there are alternative methods for building these component parts. For example, a team might build all the instructional objectives for a given unit; then build all the related content items; then, all the instructional activities, and so forth. On the other hand, a team might select one objective and then build the related content portion for that objective, its instructional activities, the appropriate resources, and the measurement devices before proceeding on to the second objective. Other methods might be combinations of these two previous approaches.

The design of this particular project proposed that the VAULT teams use the second method--build one objective and all its related parts before moving on to another objective. This particular method was chosen for three reasons: (1) the teachers, lacking any prior experience, were not professional curriculum writers, and this approach permitted them to sense the interrelatedness of the unit components;

(2) this approach required that the whole team consider each of the components from each member's viewpoint, thereby enhancing the correlation between the different areas of expertise; and, (3) this approach also guaranteed that whatever reservoir of ideas was built would be complete in the components. These reasons do not imply that the obverse would have been true if another approach had been used, rather a method had to be selected, and this approach seemed to offer certain advantages for the team writers.

Initially, the challenge of building a resource unit with all its component parts seemed awesome and uncomprehensible to the individual team members. Adding to this bewilderment was the additional requirement that the instructional objectives had to be both behaviorally stated and had to provide a range along with the cognitive taxonomy. For the most part, the teachers were unfamiliar with both educational terms and had to undergo some basic training before they felt comfortable with these two requirements. This training was provided by the consultants and the assigned FEPC staff curriculum coordinators before the unit development got under way.

After some discussion about the basic unfamiliarity of the unit writers with specifics about the three learning domains, the directors of the FEPC felt that it would create fewer barriers to the completion of the instructional objectives if they were cognitively oriented rather than written with both cognitive and affective objectives. Such a decision was not to devalue the significance of the affective domain, but to enhance the possibility of building the resource units. It was felt that greater creativity could be achieved if the unit writers felt more comfortable in their task. Also, the affective domain could be included in the resource unit in the instructional activity component through creative activities, and it was this creativity in the correlation between the areas that was of prime concern to the project.

After the brief training in writing behavioral objectives (actually a modification of the Mager[7] approach), the unit writers began building an objective and its related components. In keeping the focus of the resource unit on the student, the objectives were stated in behavioral terms for the student. These objectives were selected as the result of a continued dialogue between the team members as to what was actually needed by the student in his chosen vocational-technical course of study.

For each objective selected, the team built related content items. These had to meet several criteria before inclusion: (1) direct relationship to the instructional objectives; (2) written at the different reading levels of students involved; (3) appealing to the interests of the students; (4) offering specific information to the teacher and the student to aid in accomplishing the objective; and, (5) establishing relevancy for the student. As such, content items could be phrased as statements or posed as leading questions to help direct and/or motivate student effort. In some instances, the content items might serve as definitions of terms used in the objective. Content items, in every case, were to serve to reduce confusion on the part of the student and to promote learning efficiency.

---

[7] Robert F. Mager. *Preparing Instructional Objectives* (Palo Alto: Fearon Press, 1962).

The next and perhaps the largest (in terms of the number of entries) component to be built for the VAULT unit was the instructional activity section. Team members were instructed to build activities which would provide learning experiences enabling the student to accomplish the instructional objective. This, then, became the foremost concern of any activity--to permit achievement of the objective. For this project, team members were asked to concentrate on building a reservoir of activities of an active nature.

"Action-type" activities were stressed because the available data concerning vocational-technical students revealed that these students felt a greater personal commitment and drive to compete in the more active learning experiences. Another reason for concentrating on the "action-type" activities was to more closely simulate desirable learning situations found in the vocational-technical school. It was also believed that the building of "active" learning experiences for the academic classroom would provide greater motivation for the vo-tech student and, thereby enhance the affective nature of learning. Third, because the team members were developing new activities to relate the two different aspects of the student's education, the project directors believed that the teachers could be more creative in building "action-type" learning experiences. These action activities created much dialogue among individual team members and this dialogue stimulated considerable thought about teaching and/or learning techniques within classrooms.

Another criterion used for building activities for the VAULT programs was a double grid for activity usage; i.e., activities had to be developed for each objective in each of three areas: (1) introductory activities for familiarization with the unit and objectives; (2) developmental activities to enable the student to develop in one academic domain or another; and, (3) culminating activities to permit the student to attain a sense of completion, thereby enhancing the possibility of a student developing a better self-concept. The double grid added the further requirement that three types of activities be developed within each of the three aforementioned areas. The three types were: (1) individual activities; (2) small group activities; and, (3) large group activities.

The Use of a Resource Unit

To use the resource unit, the teacher selects a specific unit from the resource units available. After considering both class and student needs, the teacher completes a Teacher's Request Form for VAULT Pre-Planning Resource Guide. In three to four days a Pre-Planning Resource Guide Print-Out is returned to the teacher, containing objectives, content items, activities, resources, and evaluation devices. The number of items received under each component is determined by the Professional Decision Making Variables selected. This print-out is to be used by the teacher for pre-planning a teaching unit. The teacher reviews the information provided on the print-out to get an idea of the suggested material in the unit. Then materials are checked for local (building) availability, those which need to be ordered, and outside resources. After the teacher has checked the activities, materials, and evaluations, the procedures for implementing the unit are organized.

In order for each student to receive an individual print-out, the teacher fills out a Career Resource Guide Request Form for each student. Ideally, the teacher completes variables one through eighty with each student. During these individual interviews, the teacher has the opportunity to learn more about the student's interests, needs, and concerns.

In preparing the VAULT Resource Guide Request Form (student), as in Step 2, the identifying data requested at the top of the sheet is filled in. From one to four selected objective numbers are entered in the spaces provided. Student objectives usually are the same as those selected by the teacher; however, there may be different objectives selected from the taxonomy. There are no pre-planning materials for any student which are different from those requested on the Teacher Request Form. In determining the number of student objectives to select, the student's ability is considered. Two weeks is allowed to complete all the requirements for each objective selected. After the objectives are chosen, the teacher and student then circle the appropriate learner variables.

When the VAULT Resource Guide Request Forms have been completed for all students, the forms are delivered to data processing. Individual student resource guide print-outs are returned to the teacher as soon as possible. In addition, the teacher receives a *Small Group Instructional Resource Guide* which provides: (1) suggested grouping of students who have selected the same objective (two to six students); (2) content; (3) small group instructional activities; and (4) related materials and evaluation devices.

When the individual student resource guide print-outs are given to the students, the teacher and student review and discuss the print-out to clarify directions, to add or delete items, and to determine if the student is pleased with the suggestions offered. Students should not be forced to use a print-out if the print-out suggestions are not appropriate;

another resource guide for the student is available upon request. Teachers must continue to discuss progress, check on activities being worked on, and support the student throughout the total learning experience. Teacher-student conferences are essential to insure student input for unit revision. The teacher is then ready to implement the unit in the classroom.

When the content and activities have been developed, team members must locate appropriate resources. Resources are the means whereby the student is exposed to the content and are not to be confused with activities. They differ in the sense that activities are "experiences," while materials are "sources."

Guidelines were offered for the development of this resource unit component. Among the guideline criteria were relevancy to some segment of the student population designated in the unit. This criteria precludes such resources as doctoral dissertaions and esoteric treatises for most units. It also prevents the inclusion of a film entitled "The Fireman is Your Friend" for senior high school students. Indiscriminate lists of materials should be avoided. The material should be pertinent to the objective to facilitate accomplishment of the objective. Resources should include books, booklets, pamphlets, audio-visual aids, simulation games, community resource people, community resource places, etc. The tendency of most beginning writers is to overemphasize printed materials to the exclusion of a variety of other viable sources. These sources need to be readily accessible to the student in order to promote efficiency in accomplishment and should not be outdated.

The greatest difficulty experienced by unit writers was the time necessary to locate resources which would meet the criteria. Often teachers were unfamiliar with many of the resources, and others had not considered sources other than either printed or audio-visual resources or community places and resource people. Resource components in the later resource units are far more oriented toward community and human resources than the original units. Teachers explained that after the initial use of these community resources, they observed a greater student interest in the units, more interest among the local citizenry, and a greater support provided by the administration. The end result of such increased interest could be greater community involvement in school programs and activities.

The last of the components of the resource unit to be developed by the team members was the evaluation section. The importance of this section to the overall unit was emphasized because the evaluation device enabled the student, as well as the teacher, to determine his/her success in meeting the objective. In reality, the evaluation section provides an internal accountability for each objective and its related components. That is, if the student had used the content and resources effectively to complete the activity, then he/she ought to experience success in the evaluation of the objective. If he/she cannot complete the evaluation, then there is some difficulty in one or more of the components. Such internal accountability permits an almost instantaneous possibility of correcting the unit, and all the teacher needs to do is to make a correction and send it to the data processing center for correction and inclusion.

The first VAULT units only suggested specific measuring devices to the teacher and/or student; i.e., submitting a written report, making an oral presentation, giving a class demonstration, or constructing a bulletin board display. However, during the first year's usage, the teachers felt that some other means of evaluation might be more successful if they offered more direction to the students. As a result, later VAULT projects changed the evaluation section to one based on "criterion-referencing" as a means of evaluation. Again, the first attempts at criterion-referencing were less valid than the later attempts because the teachers were unfamiliar with the concept embodied in the technique. However, as with overall unit writing, experience added confidence and the third VAULT project saw more specific and more relevant criterion suggested for each type of evaluation.

The impact of this change from the early achievement-type tests to the later criterion-referencing was to change evaluation of a student from evaluation against his peers to a more personal type of evaluation for himself. This amplified the concept of developing the self-concept of a student.

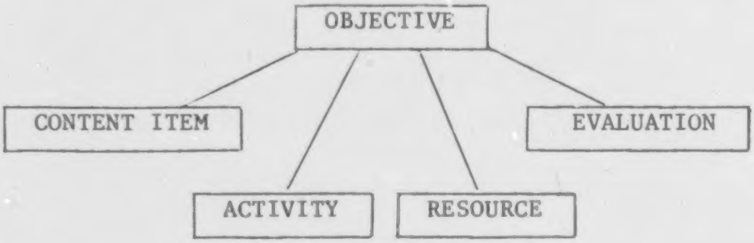
Coding the Resource Components

The second distinct, but separate operation is the process of coding components. This is a three-part system: (1) alpha coding; (2) beta coding; and, (3) charlie coding. While these terms may sound confusing, the actual coding process is not confusing if the resource unit has been developed with the interrelatedness of components in mind during the production of the software.

Coding is the process by which developers of the resource unit indicate the specific relationships existing between the component items. This requires careful, professional thinking. Mechanically establishing the relationships can be done in a number of ways, but the VAULT unit writers were asked to use specific coding sheets.

The first stage in the coding operation is called "alpha" coding. This establishes the relationship between content items, activities, resources, and evaluation devices to the objective. By using the method of development employed in the original VAULT project, these components were necessarily there because the team began with an objective and then built all the related components.

Schematically, the alpha coding can be represented as:



Following the alpha coding, the team members were asked to complete "beta" coding which established the realtionship of the component items with the variable sheets. Team members make professional decisions about such relationships as grade level appropriateness, the domain of the activity, grouping, and the type of instructional activity from variable numbers on the Professional Decision-Making Variable sheet. These decisions about the relationships of components to such variables are reflected in the retrieval of items for Teacher Pre-Planning purposes. Then teachers make professional decisions about the relationship of the same component items to variables concerning learner characteristics. These relationships include such variables as study area, general interests of the student, specific vocational interests, reading achievement levels, and occupational aptitudes. The effect of these decisions about relationships is reflected in the retrieval of items from the resource unit which have been developed for certain student characteristics. The individual student's resource guide is a print-out of the items which the unit developers built around these characteristics and which they coded to his/her particular learning characteristics.

"Charlie" coding is a series of decisions about the relatedness of the component items to the activity. Such relatedness is of vital importance to the VAULT model because the activity section permits the possibility of real individualization. As such, the component items must have a relationship to the type and nature of each activity to insure that student interests, needs, and capabilities can be used as a screen for items from the large reservoir of ideas contained within a resource unit.

This is an oversimplified explanation of the entire coding process. Actually the process is a very detailed operation which relies heavily on teachers exercising sound judgments about professional decisions. However, the brief explanation should seem to show how the interrelatedness of items is established so that only pertinent items are retrieved from the data bank upon request. Once the coding operation has been completed, data processing personnel enter the items into the computer. In like manner, the coding information is entered into the computer. All other operations necessary to make the computer-based resource unit are automatic, with data stored on discs.

Implications for VAULT Units

The growth of the VAULT Project from the original four units built by twenty-two teachers for 704 students to seventeen units built by seventy-one teachers for over 2,000 students testifies to the acceptance of the concept and the success of the model. Similarly, the scope has grown from original units built for the specific vocational-technical student in a self-contained high school classroom to the seventeen units built in Summer 1973 which were built for students of all curricula in a classroom. This growth is not limited to quantity alone, but also to quality. The last units have far greater expectancies than the early units and contain far more student concerns and interests.

The fact that the VAULT model, designed for particular needs of particular students in a specific geographic area, could be successfully used for different needs of different students in the same geographic area indicates the flexibility of the model. In the same manner, the fact that the model can be used for cognitive learning experiences as well as affective behaviors or skills also documents the flexibility of the model. The limitations of the model are apparently the limitations of the unit writers.

It would appear that the model could be used for postsecondary training, for training and retrieving in basic skill areas, for remediation in all disadvantaged areas (including the handicapped), for higher education (particularly as an alternative to the lecture technique), for training skills necessary in businesses, and for military needs. Again, any limitations would appear to be only a limited creativity on the part of the developers.

CAREER EDUCATION: COOPERATIVE EFFORTS IN NORTHAMPTON COUNTY

Frank E. Ensminger
Coordinator of Career Program Planning,
Northampton County Area Community College

The need for cooperative planning and close working relationships between secondary and post-secondary institutions engaged in career education has been voiced many times during the past ten years by those concerned with effective utilization of our human and financial resources. Duplication of effort and competition in program areas have siphoned off funds which could have been utilized to develop a strong career-ladder approach to meet the career education needs of the community. The Vocational Amendments of 1968 directed specific attention to the imperative need for a unified program of vocational education, but the message implicit in the amendments fell on unresponsive ears. Dissatisfied with the lack of voluntary progress, state educational officers are now assuming a strong leadership posture and are insisting that positive movement toward cooperative planning take place.

Although our three institutions in Northampton County held discussions during the late 1960s and early 1970s, no substantial progress toward the goal of improved cooperation was made until summer 1972, when the directors of vocational-technical schools and the president of the community college developed a position paper entitled "A Proposal for New Types of Cooperation." This paper had as its theme the desire to provide systematic coordinated career education for individuals served by the vocational-technical schools and the community college without unnecessary duplication. The paper recognized that there exists, in addition to unique responsibilities for each type of institution, broad areas of mutual concern. Incorporated within the paper were these objectives:

1. Develop career education programs which incorporate the career-ladder concept.
2. Improve utilization of facilities by shared use.
3. Share faculty resources whenever possible.
4. Improve articulation between related programs at the vocational-technical schools and community college.
5. Develop a plan for early admission of superior vocational-technical students to the community college.
6. Involve the three institutions in joint planning of facility construction programs.
7. Plan manpower surveys jointly.

After examining several alternatives, the administrators concluded that the objectives could best be met by a cooperative agreement among the three institutions. The three administrators formed an organization called the Career Education Cooperative which would identify areas of immediate concern and make recommendations dealing with these areas. A coordinator of Career Program Planning, mutually acceptable to the president and the directors of vocational education, was appointed under the terms of a federal grant for vocational education on January 18, 1973.

At a meeting of the Career Education Cooperative held in January 1973, the following priorities for the Coordinator of Career Program Planning were agreed upon:

1. Have one program in operation by September 1, 1973, which involves the cooperative use of facilities and staff. (Automotive technology was identified as the target program.)

2. Coordinate efforts to bring about closer articulation between programs at the area vocational-technical schools and related programs at the community college.

3. Coordinate the development of plans to provide for the early admission of outstanding vocational-technical students to related community college career programs.

4. Organize a Career Education Planning Council at an early date to advise upon new means of cooperation between the three institutions.

Considerable progress has been made by the Career Education Cooperative since its formation in September 1972.

1. The continued use of the machine shop and welding facilities at Bethlehem Area Vocational-Technical School by the community college materials and processes class.

2. The transfer of the LPN classes from the vocational-technical schools to the community college. This transfer has resulted in reduced costs of supportive services and has paved the way for improved articulation between the LPN and AD nursing programs.

3. The establishment of a fully operative community college program in automotive technology which involves the use of vocational-technical facilities and teaching staff for technical courses at tremendous savings to the college. The program implements the career-ladder concept by providing further education in their career field for vocational-technical graduates.

4. The completion of arrangements for the use of community college TV facilities by students enrolled in the audio-visual communications course at Eastern Northampton County Area Vocational-Technical School. Plans are being made to explore the possibilities of cooperative relationships between this course and the mass communications program now under study by the humanities division.

5. A Career Education Planning Council composed of board members from each of the three institutions has been organized and is operative.

At a recent meeting of the Career Education Cooperative, priorities for 1973-74 were established for the Coordinator of Career Program Planning:

1. Continue with the curriculum development needed for the automotive technology program.

2. Make a concentrated effort for improved articulation in data processing, machine design technology, architectural technology, and electrical-electronics technology. All articulation plans should include provisions for early admission of superior vocational-technical students to community college

programs and the granting of advanced standing in community college programs on the basis of vocational-technical instructor recommendation.

3. Coordinate efforts toward articulation between health-occupations programs at the three institutions.

4. Develop one new program per year involving cooperative relationships between secondary and postsecondary institutions. Development will be accomplished during the 1973-74 year and will be ready for the community college admissions office by October 1974. The program will begin in September 1975. Planning for the program to be offered in September 1976 will be completed in the 1974-75 academic year.

Achieving the objectives of the Career Education Cooperative has been established as one of the two leading institutional priorities for NCACC during the 1973-74 academic year. The two participating vocational-technical schools have given equal prominence to this goal within their individual hierarchies of goals for the current year.

As Coordinator of Career Program Planning, it is my responsibility to bring together the faculties of related program areas in the three institutions and to assist them in working together on the development of a unified approach to career education. Service to students and to the community in general should be the criterion measure of the efforts of the combined program faculties. My leadership role will be to focus the attention of the committees on the task at hand and to serve as a catalyst in coordinating the efforts of the group toward a common goal.

If we are successful in our combined efforts, we could present to the community a planned program of career education beginning at grade 10 and extending through two postsecondary years, which would permit the individual to move into and out of the educational scheme as his needs and interests dictate. We would probably see an increase in community college enrollment among vocational-technical graduates as they take advantage of further education in their career fields. We may also witness an upgrading in the ability levels of vocational school enrollees as more students and their parents become aware of the value of a planned career education program. There are other benefits, I am sure, but the greatest benefit will be in community support developed by the knowledge that the three tax-supported institutions in the community committed to career education are working in a united effort to serve community needs.

ARTICULATION IN THE BACK SEAT:
THE NEGLECT OF THE VOCATIONAL STUDENT TRANSFER

William K. Applegate
Occupational Program Coordinator
and
Arden L. Pratt
Dean, School of Technical Careers,
Southern Illinois University

During the 1960s, community colleges were calling for more of it. In the 1970s, senior institutions not only began to want more of it, they began to depend on it for an increasing portion of their students. "Articulation" has come to represent the potential salvation of many senior colleges and universities. However, while it would appear that current articulation is improving student movement from lower to upper division, several programs remain.

In the rush to transfer students already classed as "transfer students," individuals pursuing occupational programs in community colleges and similar institutions have been left out. Occupational students were often referred to as being in "terminal programs." They were not expected to change educational goals and move to senior institutions. Yet, they did and they are.

Neglect of provision of opportunities for sound and positive progress for occupational students has resulted partially from viewing articulation primarily as a community college-senior institution concern. However, for students interested in pursuing occupational subjects in a community college who have been enrolled in the same or a related program in high schools, secondary-postsecondary articulation is of major concern. It is conservatively estimated that approximately 30 percent of the 509,000 secondary students in Illinois who are enrolled in occupational courses will enter some type of postsecondary education.[1] For those desiring to enter occupational programs, neglect of program articulation may be a major deterrent. The other major problem area is the viewpoint of too many educators that program concerns are of greater importance than students.

Concern for articulation of both occupational students and programs has taken a back seat to the concern for other students and programs. It matters little whether this neglect results from oversight or overt neglect. The lag in institutional action and public policy deserves attention in light of the growth in occupational program enrollment at all levels.

Building Occupational Equity

The interaction of at least two factors makes articulation for occupational students increasingly important. First, rapid changes in the nature of work has made occupational education important for meeting the demands of young people for entry-level skill development, and for retraining and upgrading those already employed, both young and old.[2] "Terminal" identification of occupational programs is not only unfair; it is an inaccurate characterization of present practice.[3] Occupational program graduates at all levels typically participate in formal educational programs as alumni in community colleges, senior colleges and universities, and private business and industrial programs.

---

[1] Joyce L. Felstehausen, "Follow-up Report on Illinois Occupational Program Alumni" (Springfield, Illinois: Division of Vocational and Technical Education, June 1973), p. 59.

Second, the desire of individuals to obtain college credits and degrees and the concurrent tendency of employers to upgrade requirements for technical-level occupations has made the achievement of associate and baccalaureate degrees increasingly attractive to any employee having expectations for upward occupational mobility.

Concept of Occupational Equity

The above factors, when combined with growing enrollments for all levels of occupational preparation, require educators to assist each student in achieving his or her own and often unique educational and occupational goals. In effect, improved articulation insures the building and development of each student's occupational equity--the personal currency which improves the chances of continuing employability.

---

[2] Charles R. Monroe, "Occupational Education," *Profile of the Community College* (San Francisco: Jossey-Bass, Inc., 1972), p. 86.

[3] J. W. Thornton, *The Community Junior College* (New York: John Wiley and Sons, Inc., 1972), p. 177.

This concept of occupational equity includes the fact that a majority of occupational students at all levels of postsecondary education work full or part time while pursuing a course of study. Time is important to such individuals. When moving either laterally or from level to level, unnecessary duplication of course work--whether technical or general--is distasteful, inefficient, and unnecessary. The concept of occupational equity also embraces the idea that occupational knowledge and competence are acquired on the job as well as within the confines of formal educational programs. Educational institutions interested in making good on the idea must formulate two policies. They must accept the appropriateness of experiences gained in related occupations or through other experiences. They must reward such authenticated experiences by recognizing them in the same manner as if they were earned through formal program activities by awarding credit.

The common approach of many states in articulation has focused on the alignment of compatible programs between levels. The concept of building occupational equity makes it incumbent upon educators to focus on the articulation of students. Program articulation is a long-range, time-consuming business. In fact, it may well be a luxury that neither institutions nor students can afford. Furthermore, the results of such attempts at articulation are of questionable validity.

Paul Givens,[4] in a presentation for the American Association of Higher Education, talked about self-selected and student-designed curricula. The key features of such programs proposed by Givens include: (1) individually designed student educational contracts; (2) individual evaluation of previous work and program experiences which differ from traditional per credit grading; (3) extensive use of noncampus resources; (4) flexible scheduling to allow for various amounts of program participation; and (5) unique mixes of learning resource materials. While the matter of student-designed programs is a growing controversy in higher education, these program characteristics are basic and essential for making good articulation possible for occupational students. These are the elements of a system of education which can be responsive to the needs of students, rather than responsive in the traditional manner which often results in institutional self-service. These elements will allow occupational programs to build occupational equity for all individuals, no matter what their entry stage or their original investment.

---

[4] P. R. Givens, "Self-Selected and Student Designed Curricula," *New Approaches to Undergraduate Education* (Washington, D.C.: American Association for Higher Education, October 1972), p. 9

Obstacles and Problems

The overriding belief of the authors that occupational articulation must first be concerned with the student and second with programs grows partly out of common sense and partly out of experience.

Understanding the problems occupational students typically face in transferring from the secondary school to the community college and from the community college to senior institutions is basic to initiating more positive efforts. Frequently, these obstacles include:

1. Excessively large credit or coursework requirements for an occupational certificate or degree.

2. Unnecessary duplication of prior basic-level occupational and general education coursework.

3. Absence of identified or required competencies required for attainment of occupational proficiency.

4. Scheduling of classes which restrict or preclude access for working, commuting students.

5. Overlap and duplication of occupational program offerings of comprehensive secondary schools and area vocational centers, and community colleges.

6. Minimal or nonexistent proficiency testing options for authenticating previous work experience or formal instruction in a chosen occupational specialty.

7. Absence of planning and scheduling coursework in a manner conducive to personalizing a program and allowing the individual student to take advantage of skills and competencies possessed upon entrance.

8. Accumulated credit transfer problems for both occupational and general education components.

These identified problems faced by students are real and seem to result from obstacles within the organization and administration of occupational programs. While the exact precursor is often difficult to identify, an Illinois example gives some indication of the complex institutional obstacles.

In Illinois, there is no mandated plan for coordinating secondary and postsecondary occupational programs. Illinois has more than 730 comprehensive secondary schools and 24 area secondary-vocational centers which offer occupational programs.[5] The area centers serve approximately 46 of the 102 counties in the state. The community college system, with 38 districts and 47 campuses, serves geographic areas which include 96 percent of the state's population. However, a recent study of Illinois Public Junior Colleges conducted by the State Economic and Fiscal Commission concluded that "the area secondary vocational centers and the junior college districts have no effective statewide and little local coordination of occupational training efforts."[6] Only 12 of the 47 community college campuses reported that they even had representation on their area center's advisory committee.

Multiple cases of program duplication between centers and community colleges were also cited. For example, John A. Logan Community College offers programs similar in nature to 10 of 12 occupational programs available at the Marion Area Vocational

---

[5] Walter M. Arnold Associates, Inc., "Examinations of Patterns of Career Training by Levels for Program and Population Duplication in Illinois" (Arlington, Virginia: December 1972), p. 12.

[6] Illinois Economic and Fiscal Commission. "Illinois Public Junior College System Program Review." (Springfield, Illinois: January 1973), p. 33.

Center 10 miles away. And, Lincoln Land Community College duplicates 11 of the 14 programs offered by the Area Vocational Center in the same town--Springfield, the state capital.

Due to good funding and proportionately high-cost reimbursement from the state to area vocational centers, programs are frequently of rather high quality. When area vocational center graduates elect to continue their education within a chosen occupation, they may find that the nearby community college has little to offer in the way of actually improving skills and raising the individual's competency level.

Another obstacle perpetuated by the minimal coordination predicament revolves around the concern for insuring high program quality through evaluation. Many community college occupational teachers will informally recommend proficiency, with its full advantages for credit, to graduates of programs which they are familiar with and hence favorably disposed. On the other hand, those feeder programs about which they lack knowledge or have limited knowledge often "appear" suspect for their low quality. Since formal proficiency tests are somewhat foreign or in the early stages of development in many community colleges, the transferring student loses. Acquisition of costly time-consuming credit, which should have been waived, is often required.

While much of the preceding discussion has focused on movement of occupational students from secondary to postsecondary programs, problems encountered in the community college to senior institution movement are similar, with one complicated exception. Very few baccalaureate-level programs exist for community college graduates of occupational programs. For such students, massive basic science retraining, combined with college or university liberal arts and humanities requirements, frequently requires three years for the completion of upper division requirements. Flexible, occupationally-oriented, student-centered, baccalaureate curricula which give full recognition of an Associate in Applied Science Degree as having met the lower division requirements are conspicuously absent in Illinois--with one exception.

Front Seat Opportunities

The rapid growth of occupational program enrollments at all levels serves as an important incentive for improving student articulation in such programs. In Illinois, the occupational program enrollment in secondary schools has risen from 420,475 in 1970 to an estimated 509,000 in 1973, an increase of 21 percent. At the postsecondary level, occupational enrollment has demonstrated an even more dramatic growth from 23,500 students in 1969 to over 53,800 in 1972. This is an increase in excess of 128 percent.[7] Combining these growth figures with the projections that approximately 30 percent of the 509,000 secondary students and 15 percent of the 53,800 postsecondary occupational students will transfer immediately to the next level of formal education, the gross facts become almost as impressive as the ambitions and expectations of individual students.[8]

---

[7] *Annual Descriptive Report, July 1, 1971--June 30, 1972* (Springfield, Illinois: Division of Vocational and Technical Education, February 1974), p. 26.

[8] *Compendium of Enrollment Data and Trends in Illinois Public Junior Colleges 1965-1972* (Springfield, Illinois: Illinois Junior College Board, I, Report 6, April 1973), p. 1-6.

One must be reminded that while such figures describe only one state, the pattern repeats itself nationally. Public postsecondary occupational programs are currently enrolling more than a million students each year nationwide. Proprietary school enrollments have also reached an estimated one million students.[9] The expressed occupational orientation of a majority of our college and university students further reflects the impetus for relating education, regardless of level, to realistic goals for improving employability.

When one understands that the American system of education is an institutionalized societal reflection, it is predictable that conservation would characterize the response to a problem such as articulation for occupational students. It is not surprising, and surely as American, that a number of educational lone rangers, both individuals and institutions, have begotten a variety of educational actions attesting to the concept of educational stewardship for students. The result has been improved vocational articulation, even if on a limited scale. Several of these activities are noteworthy.

1. *Statewide Coordinating Council for Vocational Education.* The State of Florida has mandated that each community college district establish a coordinating council to review the composite vocational program offerings of secondary schools and the community college for the purposes of recommending needed programs,

---

[9] Fred F. Harcleroad and C. T. Molen, Jr., "Education for New Careers," *New Approaches to Undergraduate Education* (Washington, D.C.: American Association for Higher Education, October 1972), p. 12.

minimizing duplication, suggesting the development of cooperative agreements, developing a projected six-year plan, and insuring an "efficient, well coordinated and comprehensive vocational education program."[10] Council membership includes the superintendent and director of vocational education of each school district as well as the president and occupational dean from the community college. One would hope that such an approach to cooperative program planning would result in a better understanding of the barriers to articulation existing between occupational program levels.

2. *Voluntary Area Planning Council.* In Illinois, the school code authorizes joint agreements which may be developed between or among comprehensive secondary schools, secondary area vocational centers, and community colleges. Selected districts have "aggressively forged productive joint relationships"[11] to foster cooperative program delivery and insure improved articulation between participating institutions. For example, the Mid-Valley Area Vocational Center in Maple Park, Illinois, operates a variety of cooperative agreements with feeder high schools and employs an area

---

[10] Ibid.

[11] Walter M. Arnold Associates, Inc., "A Study to Determine the Feasibility of Implementing Joint Agreements for More Efficient Utilization of Secondary, Area Centers, and Post-Secondary Resources and Facilities" (Arlington, Virginia: September 1973), p. 29.

advisory council made up of representatives of area high schools and community colleges in nearby districts. As a result, there has been cooperative use of occupational education facilities, voluntary program articulation between participating institutions, and the development of proficiency tests in several occupational specialties to insure minimal duplication to transferring occupational students. In a similar manner, Lake Land College, a community college in Mattoon, has initiated an Area Planning Council made up of all district secondary schools. Cooperative development of compatible occupational programs and the establishment of proficiency placement into community college programs have been major activities of the council.

3. *Use of Standardized Proficiency Examinations.* While many community colleges and senior institutions prefer to develop and employ their own tests of proficiency for testing occupational knowledge and competence, the growing use of standardized proficiency tests should be noted. The new series of competency tests resulting from the National Occupational Competency Assessment Project, the College Entrance Examination Board proficiency examinations, and the Ohio State University vocational competency examinations are but a few examples of validated proficiency assessment instruments in use. These evaluation tools make it possible for a student to certify both acquired knowledge and competency within a specific occupational area, whether acquired through work experience, self-teaching, or formal classroom instruction.

4. *Evaluation as a Catalyst.* Three years ago the Illinois Division of Vocational and Technical Education initiated a statewide system for evaluating occupational programs in comprehensive high schools, area vocational centers, and community colleges. On-site visitation teams review a variety of factors regarding the organization, administration, and delivery of occupational programs. In each case an effort has been made to assess the extent of articulation of occupational programs among institutions within the institution's service area. The Composite Evaluation Report, which summarized the findings of 116 institutional evaluations conducted during the year, reported that a continuing need exists for improved efforts in "articulation and coordination of occupational programs at all levels."[12] The report recommended that formal regional meetings be conducted on a regular basis to develop more effective articulation efforts between institutions.

5. *Illinois Occupational Curriculum Project (IOCP).* Through support of the U. S. Office of Education, two community college administrators have developed exhaustively comprehensive guides to assist administrators and teachers in planning, managing, and evaluating occupational programs in secondary schools and colleges. The content of the guides covers detailed practical activities as well as step-by-step procedures for such activities as "conducting

---

[12] *Composite Evaluation Report for Occupational Education in the State of Illinois, Fiscal Year 1973* (Springfield, Illinois: Division of Vocational and Technical Education, August 1973), p. 15.

a manpower supply and demand study, writing student performance objectives based upon identifiable competencies, utilizing an occupational advisory committee, and conducting a student follow-up survey."[13] In essence, it is a very useful "cookbook" for practical occupational program administration.

The IOCP product is a series of five activity manuals covering occupational program identification, development, implementation, and evaluation and operation. The project is unique in several respects. First, by the manner of presentation, it motivates and encourages occupational educators either to use a "prefabricated" plan prescribed in the activity manuals or to "custom design" their own plan for program management. The comprehensive nature of the materials allows for either option. Second, the original development of the IOCP project has been followed by two years of in-service workshops to instruct occupational program personnel in the use of the system. (More than 1,000 individuals throughout the state have participated in the 17-hour workshop program.) Third, the project and associated activity identifies both student and program articulation as key criteria to be used in program assessment. This last point is further supported with guides for program coordination, cooperative program development, and broadly constituted advisory committees--

---

[13] J. A. Borgen and D. E. Davis, *Management Strategies and Guidelines for Using I.O.C.P. Manuals* (Springfield, Illinois: Division of Vocational and Technical Education, 1971), p. 2.

all important concerns for improving articulation between levels.

6. *Program Innovations.* Several ideas currently employed in the organization and delivery of occupational programs provide examples for improving articulation, either as a by-product of the improved communication which must exist to make the program work or because of direct intent. For example, early admissions and dual enrollment programs necessitate a preplanned approach to articulation. Such programs can substantially reduce time and unnecessary duplication for students, yet they allow diversity in occupational programs at various levels.

A recently developed bachelor of science degree in the School of Technical Careers at Southern Illinois University, Carbondale, embodies the intent of insuring good student articulation and has proven that many of the typical transfer obstacles can be avoided. The degree program was designed for community college students coming from technical, occupational, or vocational programs and accommodates those who may have been "dead-ended" because of their previous educational program. It is truly a personalized, student-centered program. The exact nature of an individual's program is determined by a committee of three advisors (who may represent business, industry, or governmental agencies as well as faculty), no specific course requirements exist, and students will *normally* complete the program in two years or less, depending upon their background. It is a task-oriented program which makes provisions for accepting authenticated work. Experience makes use of internships and yet retains a complement of liberal arts learning.

7. *The 1968 Vocational Education Amendments and Section 1202 State Commissions.* Much of the discussion in this paper has centered on exemplary activities and programs operating at the state and local level to improve the articulation of occupational students. It is clear that legislative activities at the national level hold potential for making incentives toward improved articulation a matter of public policy. Few know the status of the "1202 Commission" in their respective states, largely because the guidelines keep changing. Yet it is safe to suggest that the commissions, when constituted or appointed, will have broad powers to encourage inter-institutional cooperation and articulation of occupational programs between all postsecondary institutions. As leadership is chosen, and as members are appointed, the cooperation and articulation values important for insuring mobility and access of students to multiple levels of occupational programs need hearing. Articulate spokesmen for this area must make their expectations for improving education's service to all individuals known.

A related legislative matter is the upcoming consideration for renewing the 1968 Amendments to the Vocational Education Act of 1963. Within a few months, hearings will begin on the review of the 1968 Amendments which expire in 1975. These amendments have had a positive and amazing impact on the maintenance and development of occupational education in each state. Some suggest that they be renewed and continue as is. However, the conspicuous absence of incentives in the amendments to promote improved cooperation or insurance of better articulation has been somewhat self-defeating. In order to become efficient in the stewardship of resources going to occupational education, to avoid unnecessary duplication, and to continually expand the variety of occupational programs available such incentives are essential. They need to be addressed in any type of such renewal legislation.

8. *State Legislative Action.* A number of Illinois community colleges and secondary schools have developed cooperative and contractual agreements. One of the greatest obstacles to these agreements arose from a landmark interpretation of the Illinois Junior College Act made by the State Attorney General's office, ruling that "per capita costs" are to encompass total program costs. As a result of the ruling, those community colleges which attempted to reach agreement with secondary schools to provide occupational experiences had to charge costs well above the actual cost in the specific unit of instruction. An amendment to the act of 1973 permits "agreements between school boards and community college trustees for advanced vocational training of students at per capita costs or costs as determined by contractual agreements." The intent of this legislation was to allow the community colleges to provide introductory experiences for the high schools and to utilize existing occupational facilities located in the community. Thus the state has added its encouragement and has opened the way to minimize duplication of such facilities and make better use of state monies.

Conclusion

The responsibility for insuring relatively smooth,unobstructed movement of vocational students from secondary through senior-college levels lies primarily with practicing educators. While educational policy-makers must begin to work more diligently to move vocational articulation from a back-seat disturbance to a front-seat concern, it is the local program administrator who has a professional responsibility to put students first. Improving the options for students, eliminating artificial barriers to program entry, and minimizing the amount of expensive, time-consuming program duplication are important first steps. All are within the reach of those managing programs at the community and senior-college level, and each is important to insuring useful, accessible patterns for lifelong learning.

EVALUATION OF THE CONFERENCE

Eugenio A. Basualdo
Graduate Assistant
Department of Vocational Education
Penn State

The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education, with the basic theme of coordination and cooperation, was held on October 3 and 4, 1973. The objectives of the conference were:

1. To provide authoritative presentations on coordination and cooperation among and between Pennsylvania institutions which are involved in occupational education.
2. To provide conferees with information that will better enable them to coordinate their efforts in the initiation or continuation of cooperation ventures.
3. To provide an opportunity for educators who are concerned with occupational education to exchange ideas on cooperation and coordination of efforts.
4. To continue with a series of cooperative ventures between The Pennsylvania State University and other Pennsylvania institutions which are directed toward making contributions to the overall improvement of occupational education.

In an attempt to evaluate the extent to which the objectives were obtained, a questionnaire was developed and sent on October 29, 1973, to all participants except those affiliated with The

Pennsylvania State University. Out of 60 questionnaires sent, 45 were returned, a total of 75 percent. A follow-up letter was sent on November 19, 1973, to all 60 participants because the initial questionnaires were uncoded to preserve anonymity. The return from the follow-up was three more questionnaires, a total of 48 or 80 percent. (See Appendix D for copies of the introductory letter, questionnaire, and follow-up letter.)

Results of the Questionnaire

The results of question one (Which events did you attend? Please check the boxes that apply.) showed that the highest attendance was obtained at Jerome M. Ziegler's speech (94 percent). The lowest attendance was recorded at Donald B. Thomas's speech (83 percent). All percentages are reported in Table 8.

TABLE 8

Attendance at Talks and Workshops

Talks & Workshops	N*	% Attendance	Rank
Ziegler	45	94	1
Burkett	44	92	2
Minnis	42	88	3
Whitehead	42	88	3
Berrier	41	85	5
Notar	41	85	5
Olson	41	85	5
Thomas	40	83	8

*N = Total number of conferees, excluding those affiliated with Penn State.

The results of question two (In what event did the greatest *exchange* of ideas and viewpoints on coordination and cooperation of secondary and post-secondary education take place? Please check the box that applies.) showed that Berrier's presentation caused the greatest exchange of ideas and viewpoints, while Olson's caused the least. The total results are outlined in Table 9.

TABLE 9

Rating of Events by Exchange of Ideas

Events	N*	% Attendance	Rank
Berrier	16	33	1
Minnis	11	23	2
Burkett	10	21	3
Notar	10	21	3
Thomas	10	21	3
Coffee Breaks	9	19	6
Whitehead	9	19	6
Ziegler	9	19	6
Cash Bar - Social Hour	8	17	9
Meals	7	15	10
Olson	6	13	11

*N = Total number of conferees, excluding those affiliated with The Pennsylvania State University, that indicated an *exchange* of ideas and viewpoints per event.

The results of question three (Rate all of the presentations of the conference on the degree to which the theme "Secondary and Postsecondary Occupational Education: Coordination and Cooperation" was followed, using scale: 1 = very much; 2 = much; 3 = some; 4 = little; 5 = very little) are summarized in Table 10.

TABLE 10

Degree to Which Presentations Followed the Theme of the Conference

Presentation	Degree
Berrier	2.02
Ziegler	2.05
Thomas	2.42
Burkett	2.44
Notar	2.58
Whitehead	2.68
Olson	2.82
Minnis	3.26

The results of question four (Rate all the presentations on the amount of information provided to you, using the scale: 1 = very much; 2 = much; 3 = some; 4 = little; 5 = very little) are summarized in Table 11.

TABLE 11

Amount of Information Provided by Presentations

Presentation	Amount of Information
Ziegler	2.09
Berrier	2.25
Whitehead	2.2[illegible]
Thomas	2.43
Burkett	2.55
Minnis	2.59
Notar	2.70
Olson	3.08

The results of question five (Major papers were presented by Thomas, Burkett, Notar, Ziegler, Minnis, Whitehead, Olson, and Berrier. Please give an overall rating to each of these papers using the scale: 1 = very good; 2 = good; 3 = fair; 4 = poor; 5 = very poor) are summarized in Table 12.

TABLE 12

Overall Rating of Presentations

Paper	Rating
Vocational Education for Offenders (Whitehead)	1.88
Approaches to Statewide Coordination of Secondary and Postsecondary Occupational Education (Ziegler)	1.92
The Feasibility of Credit Exchange Between AVTS and the Community College (Berrier)	2.23
The New Technical Institute Movement in Pennsylvania (Thomas)	2.25
Project VAULT - What it is and What it Does (Minnis)	2.42
Coordination of Secondary and Postsecondary Vocational Programs (Burkett)	2.45
The Role of the Community College President in Keeping Vocational Programs Viable (Notar)	2.47
Coordination of Secondary and Postsecondary Vocational Programs: State of the Art in Pennsylvania (Olson)	3.05

The results of question six (As participants in the Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education, we are asking for your suggestions for possible topics for next year's conference theme. In the checklist below, please indicate your two [first and second] most preferred topics of interest. NOTE: If you have suggestions other than those listed, please write them in the space provided below in number 5.

( ) 1. Adult and Continuing Education in Vocational Education

( ) 2. Administration and Secondary Postsecondary Occupational Education

( ) 3. Relationships Between Counseling Programs and Occupational Education

( ) 4. Open University Concept for Vocational Education

( ) 5. ____.)

are presented in Table 13. To tabulate the preferred theme for next year's conference, it was necessary to assign a numerical value to the responses. It was decided to assign to each first choice a value of 4; to each second choice, a value of 2; and to those cases where two topics were chosen but no preference was indicated, a value of 3 was assigned.

TABLE 13

Rating of Possible Topics for 1974 Conference Theme

Topics	Rating	Numerical Value Obtained
Adult and Continuing Education in Vocational Education	1	81
Administration of Secondary and Postsecondary Occupational Education	2	73
Open University Concept for Vocational Education	3	44
Relationship Between Counseling Programs and Occupational Education	4	38
Marketing Occupational Education	5	4
Vocational Education in the Proprietary Schools. What Can We Learn From Them?	5	4
Funding (Should have someone to recap current funds that are available)	7	3
Occupational Education--Manpower Needs Versus Student Interests --- Controlling Factors in Curriculum Development	7	3
Administration and Planning of Secondary and Postsecondary Occupational Education	9	2
Adult and Continuing Education in Vocational Education and Its Relationship with Approved Postsecondary Programs in the Vocational and Technical Areas	9	2
Legislative Interest in and Concerns about Occupational Education	9	2
Open College Concept for Vocational Education	9	2
Postsecondary Occupational Education - Keeping It Current	9	2
Projecting Manpower and Training Needs in Postsecondary Occupational Programs	9	2
Special Intensive Programs in Preparing Behavioral Objectives	9	2

Total Head Count at Each Presentation

A head count at the beginning and end of each talk and workshop, including those participants affiliated with Penn State, indicated that the talk of Donald B. Thomas had the highest attendance--73 participants. The lowest attendance was recorded at the talk of David G. Minnis--47 participants. All results from the head count can be found in Table 14.

TABLE 14

Attendance at Talks and Workshops by Head Count

Talks and Workshops	N*	N**	Rank
Thomas	73	73	1
Ziegler	70	70	2
Notar	69	72	3
Olson	69	64	3
Burkett	68	69	5
Whitehead	61	61	6
Berrier	57	59	7
Minnis	44	47	8

*N = Total number of conferees, including those affiliated with Penn State at the beginning of each talk or workshop.

**N = Total number of conferees, including those affiliated with Penn State at the end of each talk or workshop.

Conclusions

The average attendance (excluding those affiliated with Penn State) throughout the entire conference was 88 percent of all registrants. The highest attendance was 94 percent; the lowest, 83 percent.

In each event of the conference, an average of 20 percent of the participants exchanged ideas and viewpoints on coordination and cooperation of secondary and postsecondary education. The event which provoked the least exchange of ideas and viewpoints involved 13 percent of the conferees; the one that provoked the greatest exchange of ideas and viewpoints involved 33 percent of the conferees.

On the average (2.53 ranking, with 1 ranked highest), the presentations followed the theme of the conference. Rankings ranged from 2.02 to 3.26.

The average amount of information provided by the presentations rated 2.47 on the scale. Rankings ranged from 2.09 to 3.08.

Presentations rated 2.33 overall with a range from 1.88 to 3.05.

The topic for next year's conference will be "Adult and Continuing Education in Vocational Education." This topic received the highest numerical value (81) among possible topics.

Based on the results of the questionnaire, it is fair to conclude that the Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education appeared to have achieved its objectives. Finally, we want to thank all participants for their cooperation in the evaluation of the conference.

BEST COPY AVAILABLE

APPENDIX A

LETTER AND QUESTIONNAIRE: COOPERATIVE EFFORTS IN COMMONWEALTH VOCATIONAL PROGRAMS

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
[illegible] CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA 16802

Department of
Vocational Education
[illegible]

November 5, 1973

Dear AVTS Director:

As you may know, the Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education was held about a month ago. The major theme of that event dealt with cooperation and coordination between secondary and postsecondary vocational institutions in the Commonwealth. It was decided to make inquiries of the many educational institutions in the Commonwealth as to the kinds of cooperative efforts relative to vocational programs and students in which they may be involved.

Enclosed is a short questionnaire, the results of which will provide us with the kind of information we need to complete this assessment on a statewide basis. Would you be kind enough to take a few minutes to respond? When the study is completed, we will share the results with you, as we have done with other research-survey efforts in the past. You may rest assured that you and your school will be provided with complete privacy in the publishing of the results.

Thanks again for your invaluable assistance. Best wishes.

Sincerely,

Angelo C. Gillie, Sr.
Professor and Chairman
Graduate Studies and Research

ACG/rzm

Enclosures

Questionnaire on Joint Programs and Faculty Sharing Among Proprietary Schools, Community Colleges, Area Vocational-Technical Schools and Other Educational Institutions

1. Institution: ______________________________

   Address: ______________________________

   Telephone Number: ______________________________

2. Chief Administrative Officer: ______________________________
   Name Title

2a. Respondent (if different): ______________________________
   Name Title

3. Do you have any joint programs with other institutions: Yes_____ No_____

4. If yes, please complete the following:

Program	Cooperating Institution	Enrollment

5. Which institution initiated each of the projects? (If joint venture, please indicate):

Institution	Program	Year

6. What facilities are shared? Check the appropriate ones.

_____ (a) Classroom

_____ (b) Laboratories - Shops

_____ (c) Assembly Areas

_____ (d) Work Practicum/Internship

7. Admissions criteria used:

High School Diploma: Yes_______ No_______

Aptitude or Achievement Tests: Yes_______ No_______

Other Tests: Yes_______ No_______ Please specify: ______________________

8. Number of instructional personnel involved in each joint program:

Joint Program	Number

9. Do you currently have any programs in the planning stages? Yes_____ No_____
Please indicate programs and institutions.

Joint Program	Cooperating Institution

10. Do your graduates receive credit toward the associate degree or the baccalaureate degree for joint programs completed in your institutions? Yes_______ No_______

Credit Awarded by	Joint Program

11. Additional Comments.

APPENDIX B

LETTERS OF INVITATION TO CONFERENCE

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
[illegible] CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA [illegible]

Department of
Vocational Education
[illegible]

August, 1973

Dear Colleague:

The Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education will be held on October 3 and 4. The event will take place on the University Park Campus of The Pennsylvania State University. The theme this year is "Secondary and Postsecondary Occupational Education: Coordination and Cooperation." The full particulars are provided in the attached tentative agenda.

We hope that one or more persons from your institution will be able to participate in this conference.

Should you plan to attend, please fill out the advance registration form and send it with your registration fee to the address indicated. Please feel free to contact me if you have any questions.

Sincerely,

Angelo C. Gillie, Sr.
Professor and Chairman
Graduate Studies and Research

ACG/rzm

Enclosures

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
[illegible] CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA [illegible]

Department of
Vocational Education

September 21, 1973

Dear Colleague:

The program for the Fifth Annual Pennsylvania Conference on Post-secondary Occupational Education has been slightly revised and a copy is enclosed. Also included is another advance registration form (which may be used for one person). The registration fee of twenty-five dollars does include the four meals.

We are looking forward to seeing you at the conference. Best wishes.

Sincerely,

Angelo C. Gillie, Sr.
Professor and Chairman
Graduate Studies and Research

ACG/rzm

Enclosures

APPENDIX C

CONFERENCE EVALUATION QUESTIONNAIRE

THE PENNSYLVANIA STATE UNIVERSITY
COLLEGE OF EDUCATION
[illegible] CHAMBERS BUILDING
UNIVERSITY PARK, PENNSYLVANIA [illegible]

Department of
Vocational Education
[illegible]
[illegible]

October 29, 1973

Dear Conference Participant:

One of the final concerns we have relative to the Fifth Annual Pennsylvania Conference on Postsecondary Occupational Education is the extent to which the conference achieved its objectives. We are asking every person registered at this event to respond to the items listed in the following pages.

Enclosed is a short conference evaluation form. Your answer for each question should be made as indicated. If you have any additional comments, please feel free to write them on the reverse side of either page of the questionnaire. Please return the questionnaire in the enclosed self-addressed, pre-paid envelope.

Your assistance and suggestions will certainly help us in planning for future conferences. The results of the evaluation will also be included in the forthcoming monograph. Thank you for your cooperation.

Sincerely,

Angelo C. Gillie, Sr.
Professor and Chairman
Graduate Studies and Research

ACG/rzm

Enclosures

CIRCLE YOUR CHOICE	The New Technical Institute Movement in Pennsylvania (Thomas)	Coordination of Secondary and Post-Secondary Vocational Programs (Burkett)	The President's Role in Keeping Community College Vocational Programs Viable (Notar)	Approaches to Statewide Coordination of Secondary and Post-Secondary Occupational Education (Ziegler)	Vault - What It Is and What It Does (Minnis)	Vocational Education for Offenders (Whitehead)	Coordination of Secondary and Post-Secondary Vocational Programs: State of the Art in Pennsylvania (Olson)	The Feasibility of Credit Exchange Between Area Vocational Schools and the Community Colleges (Berrier)
Major papers were presented by Thomas, Burkett, Notar, Ziegler, Minnis, Whitehead, Olson, and Berrier. Please give an overall rating to each of these papers using the scale: 1 = very good; 2 = good; 3 = fair; 4 = poor; 5 = very poor.	1	1	1	1	1	1	1	1
	2	2	2	2	2	2	2	2
	3	3	3	3	3	3	3	3
	4	4	4	4	4	4	4	4
	5	5	5	5	5	5	5	5

As participants in the Fifth Annual Pennsylvania Conference on Post-Secondary Occupational Education, we are asking for your suggestions for possible topics for next year's conference theme. In the checklist below, please indicate your two (first and second) most preferred topics of interest. NOTE: If you have suggestions other than those listed, please write them in the space provided below in number 5.

( ) 1. Adult and Continuing Education in Vocational Education

( ) 2. Administration of Secondary and Post-Secondary Occupational Education

( ) 3. Relationship Between Counseling Programs and Occupational Education

( ) 4. Open University Concept for Vocational Education

( ) 5. ____________________

TALKS AND WORKSHOPS	Which events did you attend? Please check the boxes that apply.	In what event did the greatest exchange of ideas and viewpoints on articulation of secondary and post-secondary education take place? Please check the box that applies.	Rate all of the presentations of the conference on the degree to which the theme "Secondary and Post-Secondary Occupational Education: Coordination and Cooperation" was followed, using the scale: 1 = very much; 2 = much, 3 = some; 4 = little, 5 = very little.	Rate all the presentations as to the amount of information provided to you, using the scale: 1 = very much; 2 = much; 3 = some; 4 = little; 5 = very little.
The New Technical Institute Movement in Pennsylvania (Thomas)			1 2 3 4 5	1 2 3 4 5
Coordination of Secondary and Post-Secondary Vocational Programs (Burkett)			1 2 3 4 5	1 2 3 4 5
The President's Role in Keeping Community College Vocational Programs Viable (Notar)			1 2 3 4 5	1 2 3 4 5
Approaches to Statewide Coordination of Secondary and Post-Secondary Occupational Education (Ziegler)			1 2 3 4 5	1 2 3 4 5
Vault - What It Is and What It Does (Minnis)			1 2 3 4 5	1 2 3 4 5
Vocational Education for Offenders (Whitehead)			1 2 3 4 5	1 2 3 4 5
Coordination of Secondary and Post-Secondary Vocational Programs: State of the Art in Pennsylvania (Olson)			1 2 3 4 5	1 2 3 4 5
The Feasibility of Credit Exchange Between Area Vocational Schools and the Community Colleges (Berrier)			1 2 3 4 5	1 2 3 4 5
Coffee Breaks				
Meals				
Cash Bar Social Hour				

APPENDIX D

CONFERENCE FORMAT AND SPEAKERS

FIFTH ANNUAL PENNSYLVANIA CONFERENCE ON POSTSECONDARY OCCUPATIONAL EDUCATION

October 3-4, 1973

BEST COPY AVAILABLE

THEME: Secondary and Postsecondary Occupational Education: Coordination and Cooperation

CONFERENCE DIRECTOR: Dr. Angelo C. Gillie
Professor of Vocational Education
and Associate
The Center for the Study of Higher Education
The Pennsylvania State University

PLACE: J. Orvis Keller Conference Center
The Pennsylvania State University
University Park, Pennsylvania

SPONSORED BY: The Center for the Study of Higher Education and the Department of Vocational Education of The Pennsylvania State University, and the Pennsylvania Department of Education

PROGRAM

Wednesday, October 3, 1973

11:00 a.m. REGISTRATION - Lobby, Keller Building

12:00 noon LUNCH - Multipurpose Room, Ground Floor, Keller Building

CHAIRMEN: DR. T. DEAN WITMER
Chief
Special Emphasis Program Sections
Pennsylvania Department of Education

MR. ROBERT L. SHEPPARD
Advisor
Division of Two-Year Programs
Bureau of Academic Services
Pennsylvania Department of Education

WELCOME: DR. G. LESTER ANDERSON
Acting Dean
College of Education
The Pennsylvania State University

SPEAKER: MR. DONALD B. THOMAS
(Room 312-14) Director of Research Curriculum
and Development
Johnstown Area Vocational
Technical School

TOPIC: "THE NEW TECHNICAL INSTITUTE MOVEMENT
IN PENNSYLVANIA"

1:30 p.m. SESSION I - Room 312-14, Keller Building

CHAIRMAN: DR. RUTHERFORD E. LOCKETTE
Chairman
Vocational Teacher Education
University of Pittsburgh

SPEAKER: MR. LOWELL A. BURKETT
Executive Director
American Vocational Association
Washington, D. C.

TOPIC: "COORDINATION OF SECONDARY AND
POSTSECONDARY VOCATIONAL PROGRAMS"

2:30 COFFEE BREAK - Multipurpose Room

Wednesday, October 3 (continued)

3:00 p.m. SESSION II - Room 312-14

CHAIRMAN: MR. DONALD H. DICKEY
Director
Crawford County Area Vocational
Technical School

PRESENTER: DR. ERNEST NOTAR
President
Niagara County Community College
Sanborn, New York

TOPIC: "THE ROLE OF THE COMMUNITY COLLEGE
PRESIDENT IN KEEPING VOCATIONAL
PROGRAMS VIABLE"

5:30 CASH BAR - SOCIAL HOUR - Nittany Lion Inn
Fireside Lounge

6:30 -
8:00 DINNER - Nittany Lion Inn, Penn State Room

HOST: DR. JOHN W. STRUCK
State Director of Vocational Education
Pennsylvania Department of Education

PRESENTER: DR. JEROME M. ZIEGLER
Commissioner for Higher Education
Pennsylvania Department of Education

TOPIC: "APPROACHES TO STATEWIDE
COORDINATION OF SECONDARY AND
POSTSECONDARY OCCUPATIONAL EDUCATION"

8:15 -
9:15 SESSION III - Room 312-14

CHAIRMAN: DR. HAROLD W. PERKINS
Director
Berks Campus
The Pennsylvania State University

PRESENTER: MR. DAVID C. MINNIS
Assistant Director
Federal Educational Project
Meadville, Pennsylvania

TOPIC: "PROJECT VAULT - WHAT IT IS
AND WHAT IT DOES"

Thursday, October 4, 1973

8:00 a.m. BREAKFAST - Nittany Lion Inn, Penn State Room

CHAIRMAN: MR. LOUIS A. DIMASI
Director
Penn Technical Institute
Pittsburgh, Pennsylvania

SPEAKER: MR. CHARLES O. WHITEHEAD
Director
State Technical Institute at Memphis

TOPIC: "VOCATIONAL EDUCATION FOR OFFENDERS"

9:15 SESSION IV - Room 312-14

CHAIRMAN: DR. CALVIN J. COTRELL
Chairman
Division of Vocational Education
Temple University

PRESENTER: DR. RICHARD OLSON
Assistant Professor
SUNY College at Buffalo

TOPIC: "COORDINATION OF SECONDARY AND POSTSECONDARY VOCATIONAL PROGRAMS: STATE OF THE ART IN PENNSYLVANIA"

PANELISTS: Northampton County Career Planning Council:
MR. FRANK E. ENSMINGER
Coordinator of Career Program Planning
Northampton County Community College

Central Westmoreland County Council on Higher Education:
DR. CLAUDE L. GATES
Dean of Faculty
Westmoreland County Community College

Beaver County Council on Higher Education:
DR. DONALD HAGEN
Vice-President for Academic Affairs
Community College of Beaver County

Delaware County Consortium:
MR. JOHN C. VAIRO
Director
Delaware Campus
The Pennsylvania State University

10:15 COFFEE BREAK - Multipurpose Room

Thursday, October 4 (continued)

10:30 a.m. SESSION V - Room 312-14

CHAIRMAN: DR. DONALD HAGEN
Vice-President for Academic Affairs
Community College of Beaver County

PRESENTER: DR. JOHN G. BERRIER
President
Lehigh County Community College

TOPIC: "THE FEASIBILITY OF CREDIT EXCHANGE BETWEEN AVTS AND THE COMMUNITY COLLEGE"

11:45 LUNCH - Multipurpose Room

CHAIRMEN: DR. T. DEAN WITMER
MR. ROBERT L. SHEPPARD

PRESENTER: DR. ANGELO C. GILLIE, SR.
Professor and Chairman
Graduate Studies and Research
Department of Vocational Education
The Pennsylvania State University

TOPIC: "SUMMARY"

1:15 p.m. ADJOURNMENT

BEST COPY AVAILABLE

APPENDIX E

ADVISORY COMMITTEE: FIFTH ANNUAL PENNSYLVANIA CONFERENCE ON POSTSECONDARY OCCUPATIONAL EDUCATION

ADVISORY COMMITTEE

Co-Chairmen

T. Dean Witmer, Chief, Special Emphasis Program Section, Department of Education, Box 911, Harrisburg, Pa. 17126

Robert L. Sheppard, Advisor, Division of Two-Year Programs, Department of Education, Box 911, Harrisburg, Pa. 17126

Members

Donald Dickey, Director of Vocational Education, Crawford County AVTS, 860 Thurston Road, Meadville, Pa. 16335

James Odum, Educational Services, Harrisburg Area Community College, 3300 Cameron Street Road, Harrisburg, Pa. 17110

Joseph J. Vallone, Director, Upper Bucks AVTS, Star Route, Perkasie, Pa. 18944

R. Rudy Filek, McKeesport Campus, The Pennsylvania State University, University Drive, McKeesport, Pa. 15132

Boyd E. Lehman, Greater Johnstown AVTS, 445 Schoolhouse Road, Johnstown, Pa. 15904

Robert Kifer, Greater Johnstown Road, 445 Schoolhouse Road, Johnstown, Pa. 15904

Donald Thomas, Greater Johnstown AVTS, 445 Schoolhouse Road, Johnstown, Pa. 15904

Robert Poirier, Allegheny County Community College, South Campus, 250 Lebanon School Road, West Mifflin, Pa. 15122

APPENDIX F

REGISTERED PARTICIPANTS

BEST COPY AVAILABLE

FIFTH ANNUAL PENNSYLVANIA CONFERENCE ON POSTSECONDARY
OCCUPATIONAL EDUCATION

October 3-4, 1973

REGISTRATION LIST

BACON, John W.
Dean, Technical Arts
Butler County Community College
Butler, Pennsylvania 16001

BERRIER, John G.
President
Lehigh County Community College
2370 Main Street
Schnecksville, Pennsylvania 18078

BLOOM, H.
Coordinator
East Montgomery County Vo-Tech
175 Turwood Road
Willow Grove, Pennsylvania 19090

BURIAK, John
Supervisor
Admiral Peary Vo-Tech School
Box 96
Ebensburg, Pennsylvania 15931

CAMPBELL, Gary Hamilton
Coordinator
Lane Co. AVTS - Mount Joy
R. D. #2
Mount Joy, Pennsylvania 17552

CONNOR, William
Dean of Car. & Con. Ed.
Northampton County Area Community College
3835 Green Pond Road
Bethlehem, Pennsylvania 18017

COOKE, Thomas C.
Vice President for Academic Affairs
Spring Garden College
102 E. Mermaid Lane
Chestnut Hill, Pennsylvania 19118

COSTELLO, William F.
Professor
Harcum Junior College
Bryn Mawr, Pennsylvania 19010

CROCHUNIS, Robert
Division Chairman
Harrisburg Area Community College
3300 Cameron Street Road
Harrisburg, Pennsylvania 17110

DICKEY, Donald H.
Vocational Director
Crawford County Vo Tech
860 Thurston Road
Meadville, Pennsylvania 16335

DIMASI, Louis
Director
Penn Technical Institute
5440 Penn Avenue
Pittsburgh, Pennsylvania 15206

DONALD, D. James
Chairman
National & Applied Science House
Delaware County Community College
Media, Pennsylvania 19063

ELISON, George W.
Dean of Instruction
Lehigh County Community College
2370 Main Street
Schnecksville, Pennsylvania 18078

ENSMINGER, Frank E.
Coordinator, Career Program
Northampton County Area Community College
3835 Green Pond Road
Bethlehem, Pennsylvania 18017

FAHNESTOCK, Charles R.
Administrative Assistant to Vice Pres.
Harrisburg Area Community College
3300 Cameron Street Road
Harrisburg, Pennsylvania 17110

FEENEY, Thomas C., Jr.
Associate Dean for Academic Affairs
Montgomery County Community College
340 DeKalb Pike
Blue Bell, Pennsylvania 19422

FENTON, Robert W.
Supervisor of Program
Delaware County Vo-Tech School
State Building, 6th & Olive Streets
Media, Pennsylvania 19063

FERRI, Eugene C.
Department Chairman
Bucks County Community College
Swamp Road
Newtown, Pennsylvania 18940

GERHART, G. Brinton
Consul, Voc. Education
Pennsylvania Department of Education
116 Executive House
Harrisburg, Pennsylvania 17126

HAGEN, Donald L.
V. P. for Academic Affairs
Community College of Beaver County
Center Grange Road
Monaca, Pennsylvania 15066

HALL, Glenn L.
Dean of Academic Affairs
Bucks County Community College
Newtown, Pennsylvania 18940

HARRIS, Donald E.
Director of Education
Williamson School
Media, Pennsylvania 19063

HERR, Carl E.
Consultant
Department of Education
Box 911
Harrisburg, Pennsylvania 17036

JACOBY, Robert
Vocational Education
Pennsylvania Department of Education
Bureau of Vocational Education
Harrisburg, Pennsylvania 17126

JAFFE, Sydney M.
Program Voc. Ed.
Department of Education
Allentown, Pennsylvania 18104

JAKUBOWSKI, Edwin
Assistant Director
School District of the City of Erie
1511 Peach Street
Erie, Pennsylvania 16501

KERN, E. Jerome
Advisor, Two-Year Programs
Bureau of Academic Programs
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

KIFER, Robert H.
Administrative Director
Greater Johnstown Area Vo-Tech
445 Schoolhouse Road
Johnstown, Pennsylvania 15904

KISTLER, James R.
Adult Program Supervisor
Lehigh County Vo-Tech School
2300 Main Street
Schnecksville, Pennsylvania 18078

KNOEBEL, Robert M.
Executive Secretary
Commissioner for Community Colleges
232 North Second Street
Harrisburg, Pennsylvania 17101

KRAFT, Charles J.
Assistant Dean
Westmoreland County Community College
Armbrust Road
Youngwood, Pennsylvania 15697

LOMMOCK, Richard N.
Research Associate
Admiral Peary Area Vo-Tech
Box 96
Ebensburg, Pennsylvania 15931

MACALUSO, Thomas
Associate Dean for Inst. Pl.
Delaware County Community College
Media, Pennsylvania 19063

McCRACKEN, John W.
Placement Director
Crawford County Vo-Tech School
860 Thruston Road
Meadville, Pennsylvania 16335

McDOWELL, Richard W.
Executive Dean
Community College of Allegheny County
595 Beatty Road
Monroeville, Pennsylvania 15146

MINNIS, David G.
Assistant Director
Federal Education Projects Center
752 Garden Street
Meadville, Pennsylvania 16335

MYERS, Byron E.
Associate Dean Tech. Car. Prog.
Luzerne County Community College
19-21 North River Street
Wilkes-Barre, Pennsylvania 18711

PITZONKA, Walter
Coordinator Vo-Tech Ed.
Bucks County Technical School
Wistar Road
Fairless Hills, Pennsylvania 19030

POIRIER, Robert J.
Director Comm. Services
Community College of Allegheny County
250 Lebanon School Road
West Mifflin, Pennsylvania 15122

ROMAN, Albert G.
Director of Vocational Education
Mon Valley AVTS
Guttman Boulevard
Charleroi, Pennsylvania 15022

SALONY, James M.
Academic Dean
Mount Aloysius Junior College
William Penn Highway
Cresson, Pennsylvania 16630

SCHIECK, George A.
Administrative Assistant
Reading Muhlenberg AVTS
Spring Valley and Bilmar Road
Box 3068
Reading, Pennsylvania 19604

SCHWEIZER, John
Chairman, Department of Sec. Science
Bucks County Community College
Swamp Road
Newtown, Pennsylvania 18940

SEDDON, Robert L.
Assistant Academic Dean
Community College of Allegheny County
595 Beatty Road
Monroeville, Pennsylvania 15146

SEILER, Gerald
Coordinator
Lebanon County Area Vo-Tech School
833 Metro Drive
Lebanon, Pennsylvania 17042

SHEPPARD, Robert L.
Advisor, Two-Year Program
Bureau of Academic Programs
Box 911
Harrisburg, Pennsylvania 17126

SILKMAN, William R.
Director of Vocational Education
Erie County Vo-Tech School
8500 Olive Road
Erie, Pennsylvania 16509

SKINNER, Richard C.
Assistant Dean for Car. Prog.
Bucks County Community College
Swamp Road
Newtown, Pennsylvania 18940

SNYDER, Lamar J.
Coordinator Vocational Education
Carbon County Area Vo-Tech
13th Street
Jim Thorpe, Pennsylvania 18229

STRUCK, John W.
State Director
Department of Education
Box 911
Harrisburg, Pennsylvania 17126

THOMAS, Donald B.
Res. & Curr. Development
Greater Johnstown Area Vo-Tech
445 Schoolhouse Road
Johnstown, Pennsylvania 15904

THRANE, William J.
Director
Spring Garden College
102 E. Mermaid Lane
Chestnut Hill, Pennsylvania 19118

TULE, James O.
Director
Montgomery County Vo-Tech Education
6198 Butler Pike
Blue Bell, Pennsylvania 19422

TWEARDY, John
Director of Education
Institute of Computer Man.
542 Penn Avenue
Pittsburgh, Pennsylvania 15222

VALLONE, Joseph John
Director - AVTS
Upper Bucks County AVTS
Star Route
Perkasie, Pennsylvania 18944

VOLKER, Ben
Department Chairman
Bucks County Community College
Swamp Road
Newtown, Pennsylvania 18940

WITMER, T. Dean
Chief Sp. Emphasis Program
Department of Education
Executive House
Harrisburg, Pennsylvania 17126

WOLFE, Joseph P.
Voc. Ed. Consultant
Pennsylvania
Diamond Building
Ligonier, Pennsylvania 15658

ZIEGLER, Jerome M.
Commissioner & Deputy Secretary
Pennsylvania Department of Education
Box 911
Harrisburg, Pennsylvania 17126

ZEISS, Albert
Coordinator of Adult Education
Schuylkill County Area Vo-Tech School
420 N. Centre Street
Pottsville, Pennsylvania 17901

APPENDIX G

PUBLIC LAW 346

AN ACT

HB 1108

Amending the act of March 10, 1949 (P.L.30), entitled "An act relating to the public school system, including certain provisions applicable as well to private and parochial schools; amending, revising, consolidating and changing the laws relating thereto," further providing for the preparation, the submission of plans for the operation of technical institute attendance areas.

The General Assembly of the Commonwealth of Pennsylvania hereby enacts as follows:

Section 1. Section 1841, act of March 10, 1949 (P.L.30), known as the "Public School Code of 1949," amended August 14, 1963 (P.L.1065), is amended to read:

Section 1841. Area Vocational-Technical Schools and Technical Institutes Authorized--An area vocational-technical board may establish, maintain, conduct and operate schools, departments or classes to prepare for vocational industrial, vocational agricultural, vocational homemaking, business and vocational distributive occupations, technical occupations, such as aides and assistants, in physical, biological, space and other sciences, mathematics, engineering, construction and design, computer programming and maintenance, and health occupations and for any other occupations requiring vocational or technical training and education, to be known as "area vocational-technical schools," for the education of pupils, out-of-school youth and adults residing in the attendance area.

[In counties of the first and second class, an] *An* area vocational-technical board *or several area vocational-technical boards jointly* may *provide for,* establish, [a school or] *maintain, conduct and operate* schools, *departments, or classes* to be known as "technical institute" [.Such technical institute shall] *to educate, train and* offer post high school programs and courses of *not more than* two years' duration, which will prepare out-of-school youth and adults for competency in sub-professional, technical, health service, business, commercial, merchandising and skilled occupations and for any other occupations for which technical training is helpful to an employer and increases students' qualifications for employment. Technical institute programs and courses shall be coordinated with those offered in area vocational-technical schools to insure progressive advancement of students. Such institutes shall be organized in accordance with proposals of [county boards, boards of public education, or two or more] *area vocational-technical* boards of school directors, [jointly,] which are approved by the State Board for Vocational Education. All technical institutes shall be established, operated and in all respects conform to standards prepared by the Department of [Public Instruction] *Education* and adopted by the State Board for Vocational Education. Area vocational-technical schools, as approved by the State Board for Vocational Education, may be organized as vocational-technical service centers in which pupils may enroll full-time or in which pupils enrolled in academic high schools may elect to attend part-time. Technical institutes approved by the State Board for Vocational Education may enroll out-of-school youth and adults full-time or part-time as the students may elect.

APPROVED--The 28th day of December, A.D. 1972.

MILTON J. SHAPP

The foregoing is a true and correct copy of Act of the General Assembly No. 346.

Secretary of the Commonwealth

CENTER FOR THE STUDY OF HIGHER EDUCATION

THE PENNSYLVANIA STATE UNIVERSITY

The Center for the Study of Higher Education was established in January 1969 to study higher education as an area of scholarly inquiry and research. Dr. G. Lester Anderson, its director, is aided by a staff of twenty, including five full-time researchers, and a cadre of advanced graduate students and supporting staff.

The Center's studies are designed to be relevant not only to the University and the Commonwealth of Pennsylvania, but also to colleges and universities throughout the nation. The immediate focus of the Center's research falls into the broad areas of governance, graduate and professional education, and occupational programs in two-year colleges.

Research reports, monographs, and position papers prepared by staff members of the Center can be obtained on a limited basis. Inquires should be addressed to the Center for the Study of Higher Education, 101 Rackley Building, The Pennsylvania State University, University Park, Pennsylvania, 16802.

SELECTED PUBLICATIONS AVAILABLE FROM THE CENTER FOR THE STUDY OF HIGHER EDUCATION

Monographs

Insights into Higher Education: Selected Writings of CSHE, 1969-73, Vol. II, Community College and Postsecondary Occupational Education, Winter 1974.

Insights into Higher Education: Selected Writings of CSHE, 1969-73, Vol. I, Governance, Winter 1974.

Anatomy of a Collective Bargaining Election in Pennsylvania's State-Owned Colleges, G. Gregory Lozier and Kenneth P. Mortimer, February 1974.

Variability in Faculty Perception of the Legitimacy of Decision Making at Nine Pennsylvania Institutions, David W. Leslie, November 1973.

Human Services Occupations in the Two-Year College: A Handbook, Theodore E. Kitter and Martha Burns, May 1972.

Institutional Self-Study at The Pennsylvania State University, Kenneth P. Mortimer and David W. Leslie (eds.), December 1971.

Numbered Reports

The Comm-Bacc Study: Postbaccalaureate Activities of Degree Recipients from Pennsylvania Institutions 1971-72, William Toombs, August 1973, Report No. 23.

Students and Unions, Neil S. Bucklew, July 1973, Report No. 22.

Compensatory Education in Two-Year Colleges, James L. Morrison and Reynolds Ferrante, April, 1973, Report No. 21.

Pennsylvania's "State-Owned" Institutions: Some Dimensions of Degree Output, William Toombs and Stephen D. Millman, February 1973, Report No. 20.

The Trend Toward Government Financing of Higher Education Through Students: Can the Market Model be Applied?, Larry L. Leslie, January 1973, Report No. 19. (Out of print.)

The Rationale for Various Plans for Funding American Higher Education, Larry L. Leslie, June 1972, Report No. 18.

Collective Bargaining: Implications for Governance, Kenneth P. Mortimer and G. Gregory Lozier, July 1972, Report No. 17.

Productivity and the Academy: The Current Condition, William Toombs, May 1972, Report No. 16. (Out of print.)

Exceptional Graduate Admissions at The Pennsylvania State University, Manuel G. Gunne and Larry L. Leslie, March 1972, Report No. 15.

The Quality of Graduate Studies: Pennsylvania and Selected States, Stephen D. Millman and William Toombs, February 1972, Report No. 14.

Reports 1-13 out of print.

Conference Reports

The Fourth Annual Pennsylvania Conference on Post Secondary Occupational Education, Angelo C. Gillie, August 1973.

Bibliographies

Selected Bibliography in Higher Education, September 1969, Revised April 1972.

Occasional Papers

Journals of Education for the Professions: A Preliminary Study, Ann Kieffer Bragg and G. Lester Anderson, May 1974.

Ralph L. Boyers in collaboration with Robert E. Sweitzer, *Collective Bargaining in Pennsylvania: A Summary of Collective Bargaining Agreements*, August 1973.

Naomi V. Ross, *Community College Teacher Preparation Programs in the U. S.: A Bibliography with Introductory Notes*, August 1972.